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# HALLGARTEN & COMPANY

**Initiating Coverage** 

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### Maya Gold & Silver (TSX-v: MYA) Strategy: Long

Key Metrics			I	FY10	FY11e	FY12e
Price (CAD)	\$	0.24	Consensus EPS		n.a	n.a
12-Month Target Price (CAD)	\$	0.50	Hallgarten EPS		(\$0.07)	(\$0.06)
Upside to Target		108%	Actual EPS	(\$0.04)		
12mth hi-Iow CAD	\$0.2	35 - 0.54				
Market Cap (CAD mn)	\$	11.8	P/E	n/a	n/a	n/a
Shares Outstanding (mns)		49.2	Dividend	0.00	0.00	0.00
Fully Diluted (mns)		77.6	Yield	n/a	n/a	n/a

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## Maya Gold & Silver

#### First Mover Advantage in Morocco

- + Maya has secured a number of very interesting properties Morocco, a country with over a thousand years of mining history
- + It has a very well-positioned deal-finder in the form of Noureddine Mokaddem, one of the most senior figures in mining in the country
- + The most advanced project is the past-producing Zgounder silver mine that could be in operation within 24 months at a rate of one million ounces per annum
- + apital needed to revive Zgounder would be US\$18mn
- The company has payment commitments for purchases of properties that will be coming due in the next few months and does not have the cash to hand, creating a financing need in what is a difficult environment at the current time
- While not our preferred precious metal, we feel that silver deserves to be closer to \$30 than the \$50 that many silver-bugs dream of. However, Maya is very viable at \$30 silver and does not require higher prices.

#### Past producing assets in a novel location

Never let it be said that an exotic location scares us off. When we first were introduced to Maya in late 2011, our first reaction was to think it another Mexican precious metals play amongst the numerous supplicants seeking attention. However the company's name is a misnomer in two ways for neither is its focus Central American, nor does it have any gold to speak of. Instead this Montreal-based company has its attention centred on Morocco in North Africa where it has several past-producing properties, in partnership with a State mining entity. Morocco has been a site of mineral production for thousands of years, but our only previous encounter with its potential was in looking at the historical Manganese production there in the 1930s.

Maya's assets though are mainly silver (Zgounder and Amizmiz) in the first instance, but with further exposure in secondary properties like Tungsten and Moly, and we find, shortly in Lead & Zinc.

#### **Mining in Morocco**

Despite Morocco's not being on the radar of the publicly quoted mining sector, the country is no slouch when it comes to mining and is, in fact, highly dependent on the extractive industries with mineral commodities and products being Morocco's leading foreign exchange earning sector, accounting for about 35% of its foreign trade.

In 2009, it was the world's third-ranked producer of phosphates, according to the USGS, after China and the United States, and controlled one-third of the international trade in phosphates and their derivatives. Morocco is in the process of expanding its phosphate derivatives sector. The exploitation of

the phosphate sector is dominated by a State-entity, the Office Chérifien des Phosphates, which holds phosphate deposits containing more than 30% of the world's total phosphate reserves.

In 2010, Morocco produced:

- 17% of the world's output of phosphate rock
- 6% of the world's output of barite
- 2% of the world's output of cobalt
- 2% of the world's output of fluorspar
- 1% of the world's output of lead.

The USGS notes that Morocco hosts several world-class deposits of minerals, including at Bou-Azzer, which was the world's only deposit where cobalt was mined as a primary product, and the Imiter silver deposit (in closer proximity to Maya's assets).

The USGS also noted that silver is Morocco's second most important mineral commodity after phosphates. Silver in Morocco occurred both as the principal metal in ore deposits at the Igoudrane and Imiter mines and as a byproduct from base-metals operations. Most of the country's silver production came from the Imiter Mine, which we shall elaborate upon later in this note. The Imiter Mine has a capacity of 300,000 metric tpa of ore. The Igoudrane Mine had a capacity of 500,000 tpa of ore.

The foreigners in the Moroccan mining space, besides Maya, include:

- Odyssey Resources Ltd ODX.v (base metals, mainly Cu in the Anti-Atlas district)
- Agricola Resources plc OFEX:AGC (gold in the Anti-Atlas district)
- Kasbah Resources KAS.ax (tin in the Central Hercynian Massif)
- Metalex Ventures Ltd MTX.v (diamond exploration)

The mining taxation and promotion regime in Morocco is favourable in our opinion. As is the case elsewhere, fees are payable on mining permits or payable upon the issuing or renewal of exploration. As an incentive to promote mining exploration and exploitation, Morocco grants customs duty and tax exemptions on imported equipment. There is also a 50% reduction on company tax or income tax for mining companies that export their mining products, whether directly or indirectly. It is permitted for mining companies to set up a tax exempt reserve fund for exploration and development investment equivalent to as much as 50% of fiscal profits, with a ceiling of 30% of turnover. The national government may also contribute from 50% to 70% of the infrastructure requirement costs (i.e. roads, water supply, an electricity connection).

#### Zgounder

This silver deposit is located in the Anti-Atlas mountains of central Morocco, some 150km south of Marrakech and approximately 250km east of the major port city of Agadir. It is accessible via gravel road and covers some 16 square kilometres.

#### Silver Production History – back through the mists of time

This deposit has been around for a long while by anyone's measure. Estimates of its original initial production are in the tenth and thirteenth centuries. Back then veins, containing stringers of visible native silver, were mined in shallow oxidised zones. There is no information available on the mine's original silver grades, however the extensive ancient tailings from these early mining operations is estimated by BRPM (the State Mining Bureau) to have an average silver grade of 325g/t. A slag sample from the ancient smelter assayed 509g/t Ag, while two samples of ore picked up beside the ancient smelter ruins were visually estimated by geologists in recent times to contain 0.5%-1.0% visible native silver.

Flash forward a millennia or so and from 1982 to 1990 the mine was built and operated by the Societe Miniere de Sidi Lahcen (SOMIL) which had identified an original reserve of 435,000 tonnes, grading 385g/t Ag. It was operated as an underground mine until placed in 1990 on a care and maintenance basis as a result of the then-prevailing weak silver prices. The plant was sizeable with a rated ore throughput capacity of approximately 75,000-80,000 tonnes per year. A total of 500,000 tonnes of ore was treated during the SOMIL period at an average grade of 330g/t Ag.

In the early part of 1998, as a part of the Moroccan government's privatisation plans, the Zgounder Mine was put out to tender which ultimately resulted in the signing of a Letter of Intent by a TSX Venture-listed company, Icelandic Gold in November 1999. That company undertook quite a substantial amount of work, then desisted due to the persistently low silver price and was transformed into Iberian Minerals and refocused its mining efforts on Spain. Iceland's plan had been to double the rated capacity and put through around 200,000 tonnes of ore per annum.

The recent history with Zgounder dates back to March 2011, when the Moroccan government entity, *L'Office National des Hydrocarbures et des Mines* (ONHYM), launched an international tender in order to rehabilitate and develop the Zgounder silver project.

ONHYM is a state-owned company responsible for the promotion of the mining and oil activities of the Kingdom of Morocco. ONHYM pursues four fundamental objectives: the intensification of mining and oil exploration, the development of partnership, the research of technical excellence and the establishment of a culture of professionalism in the extractive industries.

ONHYM awarded the mine to Maya, after the international tender was decided, and in September 2011 Maya entered into a joint venture with ONHYM to acquire 85% of the Zgounder silver deposit (via a Moroccan subsidiary, of which ONHYM would hold a 15% net carried interest). As part of its offer to the ONHYM, Maya and SGS Canada prepared a comprehensive program to further explore the property, develop infrastructure and restart the underground operations of the deposit.

#### The Mine

During its period of control SOMIL undertook 15,383 metres of drilling, built 9,220 metres of underground drifts and crosscuts, as well as 1,200 metres of raises and ore passes.

The Zgounder Mine's South Zone, the previous principal source of ore, is accessed by horizontal adits, set 25 metres vertically apart, from a moderate to gently dipping hillside. The adits are located over a

750 metre strike length and provide direct access to ore zones and mine workings at depths of up to 250 metres. In the 1980s, approximately 40% of the South Zone's strike length was reported to be represented by economic ore. A visual examination of previous mine plans suggest a minimum of 1.0 million tonnes of potential ore grade material may be accessible from existing mine workings.

A parallel, new and potentially higher grade source of ore, the North Zone, lying 70-100 metres north of the previous workings, has been identified by drilling since the mine's closure.



#### The Mill & Recovery Plant

The Zgounder mill complex (pictured at the left) was kept on a *care and maintenance* basis by the ONHYM since operations were shutdown in 1990. The normally arid climate of the Anti-Atlas has helped keep the mine's plant and equipment in generally good condition.

The existing cyanidation plant was originally designed to process 75,000-80,000 tonnes of ore per annum.

The historical production, in the period 1982 to 1990 was reported to be 500,000 tonnes grading at 330 g/t Ag yielding 5.9mn ounces of silver.

The end product of the circuit is bullion bars from a smelting furnace, silver is recovered using the Merrill Crowe process after conventional cyanidation. In the view of D. Arnold, an independent consultant last decade (working for Iceland), there are several aspects of the plant that are over-designed.

Source: Maya

In Arnold's opinion, the reaction tanks were relatively small and would have to be enlarged and the process circuits would need to be redesigned to meet the target ore production rate of circa 200,000 tonnes per year. Maya is shooting for only half that level of throughput, but we think it is interesting to note Arnold's view because it shows the potential to double the production with only relatively limited changes/upgrades. Only the secondary crusher and a double-deck vibrating screen are missing from the set-up. The two 3.0 x 1.7 metre ball mills will also need upgrading or replacement to meet this target. There are two thickeners, four leach tanks and 10 counter-current decantation tanks, which would also

require modification or enlargement to double production. There are 3 x 850 KVA (680 kW) UNELEC generators present and reported to be in good order. In addition, there are 3 x DEMAGSPIROS compressors. There is a well-equipped fitted workshop, along with a large warehouse stocked with a considerable amount of new spares. These spares include two new mill pinions, plus new mill girth gear and mill reduction gear, all still packaged.

#### Infrastructure

For what appears to be a very isolated location, the infrastructure is surprisingly good. Potable water is piped by gravity from an artesian well five kilometres distant from the mine's offices. Meanwhile a small dam, upstream from the plant, helps ensure an adequate water supply during the dry summer months.

Electrical power for the mine and mill was provided by 3 x 850 KVA (680kW) diesel-fired UNELEC generators, which are said to be well-maintained and in good condition. The estimated cost of electricity generation is around US\$0.20-0.22kwh. However, BRPM has indicated the Zgounder Mine can readily be connected to the national grid at Tallouine at a cost of around US\$1.5 million. Should this occur, electrical power costs would be expected to decline to around US\$0.10kwh.

With Morocco's long history of mining the company feels there will be adequate skilled labour readily available. Labour would be sourced from Tallouine or nearby villages, and then either bussed to Zgounder on a daily basis, or housed in the mine's existing single and married employees' quarters.

#### The Tailings Potential

There are two sets of tailings, the aforementioned "ancient" tailings and the "modern" tailings. There would appear to be potential to exploit these as an inexpensive, early source of cash flow. The "ancient tailings" contain around 700,000 ounces of silver, while the "modern tailings" are believed to contain between 1.4 and 2.5 million ounces, making a combined potential resource of 2.1-3.2 million ounces.

The "ancient tailings" are the 1 to 4 metres thick surface scree, covering the North Zone's present outcrop. The BRPM estimates there are 66,000 tonnes of this material present with an average silver grade of 325g/t. The average grade of 20 surface scree samples taken by Icelandic was 377g/t Ag (or 438g/t Ag from 17 samples known to be ancient, as opposed to modern, tailings). The average grade of eight samples taken by ACA Howe was 574g/t Ag.

Metallurgical tests undertaken by RPC of Canada indicate around 93% of the contained silver can be recovered by conventional milling and cyanidation. Icelandic undertook a pitting program in order to confirm BRPM's resource figures.

The "modern tailings" are represented by the 500,000 tonnes of ore treated during the 1980s and deposited in a V-shaped valley (shown in the photo on the following page). Channel samples taken by ACA Howe gave the following results:

	Thickness (m)	Ag Grade g/t	Check Assay g/t
Upper Tailings	9.0	250	224
Lower Tailings	12	109	111

Source: ACA Howe

The limited sample size meant that these results should be treated as indicative only. A non- comparable channel sample by Icelandic gave an average value of 95g/t Ag. The high silver values in the modern tailings are believed to be due to:

- insufficient residence time in the reaction tanks,
- the presence of coarse silver particles, and
- an insufficiently fine grind during previous operations.

The principal silver minerals remaining in the modern tailings have been identified as being: 70% Ag<sub>2</sub>S, 25% native Ag and 5% other sulphides. Column tests undertaken by RPC of Canada indicated that conventional heap leach methods should recover between 70% and 85% of the contained silver.



#### Source: Maya

As can be noted, there is a small amount of liquid on the tailings. Run-off happens only once a year when the snows in the Atlas Mountains melt. The "modern tailings" will have to be moved, as they represent an unacceptable environmental liability - a suitable heap leach and disposal site is located about two kilometres away.

#### The Geology

There are two principal silver ore zones at Zgounder, both known to be at least 800 metres in length and trending parallel in an E-W direction. The lower grade ore zone (300-500g/t Ag) is generally between 10 and 25 metres thick. The higher grade ore zone (300-2,000g/t), located 75 metres to the north, is normally between 2 and 8 metres thick.

CMT (the former owner) had performed a program of reserve extension between 2000 and 2003. It yielded a total resource of 16mn ounces Ag. They also came up with a non-NI 43-101 estimate of the geological potential of the likely extensions of the ore body which they estimate exceeds 45mn oz. The

former owner also reported that the newly discovered North Zone exhibited higher silver grades and narrower widths thereby providing further exploration targets.

A historical resource dating from 2004 estimates:

- 582,000 tonnes at 361 g/t Ag (150 g/t Ag cut-off) (7.5 mn ounces)
- 500,000 tonnes at 125 g/t Ag [surface tailings] (2.2M ounces)

As these resource numbers are not NI 43-101 compliant, Maya is not treating the historical estimate as current mineral resources or mineral reserves.

Also, based on previous work, ONHYM had estimated (at a cut-off grade 150 g/t Ag):

- Proven reserves: 120,000 tonnes at 500 g/t Ag
- Probable reserves: 195,000 tonnes at 360 g/t Ag
- Possible reserves:267,000 tonnes at 300 g/t Ag

It is Maya's intention to commission an independent NI 43-101 technical report at a later date.

Zgounder's current ore reserve was determined by the BRPM to amount to 4.58 million ounces of silver. An additional potential resource, estimated by Icelandic to be between 1.4 and 2.5 million ounces of silver, is located in the 500,000 tonne tailings dam.

A report by ACA Howe International report, commissioned by Icelandic, found that the Zgounder deposit bears a strong structural, lithological and mineralogical resemblance to the major Imiter deposit, which we discuss later in this note.

Mineralogical work conducted on Zgounder samples by Icelandic Gold identified a silver-mercury sulphide mineral with a close resemblance to imiterite, originally described from the Imiter Mine; the overall parageneses of the two deposits are very similar. The Imiter deposits extend to at

least 400 metres depth, though the original workings, as at Zgounder, are restricted to the upper 1-200 metres. A blind deposit has also been discovered at a depth of 150 metres with a vertical extent of 300 metres, immediately adjacent to a granitic intrusion. The intersection of granitic rocks at depth in the East Sector at Zgounder is thus of interest. The convergent fracture zones mapped at Zgounder also suggest two primary sources at depth, and in the eastern sector to the south of the known mineralisation, with potential for bonanza zones. ACA Howe felt that aggressive exploration of the Zgounder deposit could lead to similar discoveries.

The overall budget allocated by Maya to the transaction for the first 24 months is CAD\$20.5mn, which includes the initial cash payment, exploration, infrastructure development in addition to mine and site rehabilitation. ONHYM will retain a 3% royalty on sales.

#### Production

The plan of action at Zgounder consists of two parts. We have already mentioned the "modern" tailings at the site and these represent an obvious target for action with their high grade, relative proximity and

the need to do something about securing them environmentally. Thus integrating tailings material into the start-up of mining is the first step with blending of the tailings into new ore production.

The budget for reactivating the mine and its facilities is divided into three phases:

Phase 1 (0-4 months) - outgoings of \$5.25mn of which \$5mn is for rehabilitation of infrastructure, connection to power, tailings and dams, mine refurbishment and advances on equipment purchases and \$250,000 is for surface stripping and sampling.

Phase 2 (4-8 months) – outgoings of \$5.25 of which \$3.5mn goes towards the same ongoing works as above, plus paying the balance of the equipment purchase. On top of this, there is budgeted \$1.75mn of exploration work, mainly drilling.

Phase 3 (8-24 months) – outgoings of \$7.5mn of which \$1mn goes to the mine restart, \$3mn to drilling and a feasibility study and \$3.5mn to ONHYM in payment for the concession.

The total reactivation budget is thus \$18mn spread over two years and the mine should employ around 162 people once operating again.

The key parameters for the earnings model are:

- ✓ Metal recovery 90%
- ✓ Exchange rate Dh/\$ 8
- ✓ Silver price \$/oz 30
- ✓ Yearly cost increase 5%

Using these, one can prepare a model of how the mine might look from an economic point of view over the company years. The company's actual model for earnings from Zgounder is shown on the next page. It uses a run-rate for production of 100,000 tpa of ore (though as seen, Iceland and its consultants thought they could go to twice that).

Even with the lower throughput (and without seeking to expand the resource) we believe the mine will be profitable with a capex payback of slightly over one year. Further, we believe new profits should exceed \$10mn per annum for the first four years (before accounting for ONHYM's 15% interest). This, as we calculate it, would fall below \$10mn in the fifth year of production as the royalty should jumps 17.5% from the fourth year. Nevertheless, we estimate that over the planned minelife the net profits should exceed \$88mn for what would be a capex of slightly over \$20mn.

Zgounder Revenue Model											
Production Metrics	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Total
Ore processed (t)	-	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	900,000
Grade (g/t)	-	343	343	343	343	343	343	343	343	343	343
Metal production (oz)	-	995,373	995,373	995,373	995,373	995,373	995,373	995,373	995,373	995,373	8,958,35
REVENUES											
Sales	-	29,861,189	29,861,189	29,861,189	29,861,189	29,861,189	29,861,189	29,861,189	29,861,189	29,861,189	268,750,705
Expenses	-	12,348,000	12,965,400	13,613,670	14,294,354	15,009,071	15,759,525	16,547,501	17,374,876	18,243,620	136,156,01
Mining	-	2,315,250	2,431,013	2,552,563	2,680,191	2,814,201	2,954,911	3,102,656	3,257,789	3,420,679	25,529,25
Milling	-	9,261,000	9,724,050	10,210,253	10,720,765	11,256,803	11,819,644	12,410,626	13,031,157	13,682,715	102,117,012
Fixed charges	-	771,750	810,338	850,854	893,397	938,067	984,970	1,034,219	1,085,930	1,140,226	8,509,75
Operating gross Margin	-	17,513,189	16,895,789	16,247,519	15,566,836	14,852,118	14,101,665	13,313,689	12,486,313	11,617,570	132,594,68
ONHYM ROYALTY (3% of S.C.)	-	895,836	895,836	895,836	895,836	895,836	895,836	895,836	895,836	895,836	8,062,52
Maya / Management fees (2.75% of C.A.)		821,183	821,183	821,183	821,183	821,183	821,183	821,183	821,183	821,183	7,390,644
PROFIT BEFORE AMORTIZATION AND TAXES		15,796,171	15,178,771	14,530,501	13,849,818	13,135,100	12,384,646	11,596,670	10,769,295	9,900,551	117,141,52
AMORTIZATION	-	1,450,000	1,943,750	1,943,750	1,943,750	1,943,750	1,943,750	1,943,750	1,943,750	1,943,750	17,000,000
IS (17.5%) and minimum contribution		597,224	597,224	597,224	597,224	2,102,193	1,970,864	1,832,968	1,688,177	1,536,147	11,519,24
(2% of S.C 4 years)											
NET EARNINGS		13,748,947	12,637,797	11,989,527	11,308,844	9,089,157	8,470,033	7,819,952	7,137,368	6,420,654	88,622,27
ONHYM PARTICIPATION (15%)		2,062,342	1,895,670	1,798,429	1,696,327	1,363,374	1,270,505	1,172,993	1,070,605	963,098	13,293,342

Source: Maya Gold & Silver



Source: Maya

#### Amizmiz

The Amizmiz gold property (pictured above) covers 80 square-kilometres, and is situated about 60 kilometres south of Marrakech. The historic Mo-W-Cu Azegour Mine is about 8 km south of this area. The village of Azegour is attainable via a paved road from Amizmiz which crosses the Jbel Semmidi mountain.

This was Maya's first foray into Morocco and the company paid CAD\$250,000 in cash and 2.7 million shares in Maya to SEGM for a 90% interest and 500,000 shares in Maya to Aumar Minerals for the remaining 10% interest. The company committed to spend around CAD\$425,000 on exploration before November 2015.

The Amizmiz property is situated on the northern flank of the Central High Atlas, and the northern portions of the two Exploitation Licenses extend onto the southern part of the Haouz Plain. Altitude along the northern cultivated High Atlas slopes ranges from 940 m to 1,100 m ASL. The rest of the property is mountainous and features deeply incised ravines and escarpments with elevations ranging from 1,100 m up to 2,100 m. Dry stream gravel beds occupy the valley bottoms. Most of the known gold

occurrences lie at altitudes between 1,300 m and 1,700 m ASL.

The infrastructure for developing a mining project is good in this part of the Central High Atlas. Electricity could be brought to the property by a 10 Kv power line originating from the Cavagnac Power dam 30 km to the NE. Telecommunications are available in the area and cellular phone stations are connected to the national network. Water can be obtained from wells or brought by cistern trucks. The small villages on the northern slope are serviced by water wells, small reservoirs and irrigation networks.

Gold was discovered on the property in 1999 by a shepherd. In the first few years some desultory exploration took place under the auspices of local companies. In 2005, SEGM excavated six adits (the portals shown in the photo below) totaling 454.5 m in length. Adits G1 and G2 evaluated the Az5 zone above and under the drill hole intersections. Adit G3 investigated zone Az74. Values up to 95 g/T Au were obtained from chipped samples.

Adit G4 was located on the Az10 zone and intersected the mineralized zone between surface and drill hole SC4-AZ10. Adit G5 verified the Az79 zone which was intersected by DDH SC6-AZ79. The adit followed a lead-zinc mineralized open release joint but failed to intersect the Az79 mineralized zone. Finally, a short adit (G6) was cut in the rhyodacite lava flow that contains disseminated sulphides and a stockwork of arsenopyrite mineralization. Gold values up to 40 g/T were obtained.



#### Source: Maya

Previous works on Amizmiz project have highlighted more than fifty gold and silver occurrences and four types of precious metals mineralization. Thus far, between 2009-2011, Maya has spent CAD\$3.4mn on exploration. Some of the most promising intersections from this work are shown in the table below:

DDH #	From (m)	To (m)	Width (m)	True Width (m)	Au (g/t)
Tiqlit Zone					
A3	92	100	8	8	7.05
(incl.)	92	112	20	20	3.02
A11	180	181	1	1	1.27
AZ Zone					
SCAZ	110.7	12	1.3	1.3	8.70
A-5	109	110	1	1	1.07
	118	119	1	1	1.56
TR Zone					
SCTR-1	25.47	26.97	1.5	1.5	25.16
	25.87	26.67	.8	.8	45.92
SCTR-5	69.94	73.31	3.37	3.37	.59
SCTR-6	28.10	29.70	1.6	1.6	21.99
T Hill					
SCCT-2	137.4	138.4	1	1	1.2
	132.4	133.4	1	1	1.26

Source: Maya

A NI43-101 Report dated December 21, 2010 was prepared by Dr. Michel Boily, PhD., P.Geo validated the company's resources calculation of total inferred resource of 342,094 ounces (819,769 tonnes at an average grade of 12.98 g/t Au). The details are in the table below.

Zone	Inferred Tonnage (T)	Au g/t	Au oz	Aug/t Before dilution
Az5	410,944	9.06	119,702	21.78
AzSB	11,625	7.97	2,979	10.66
AzS	51,300	10.66	17,582	8.24
TRNA	232,500	22.25	166,320	24.2
TRNC	113,400	9.74	35,511	9.74
Total	819,769	12.94	342,094	

Source: Maya

In our opinion, such a resource would rank it as a high-grade gold deposit by almost any measure in this day and age of thin gruel on the grade front in most new discoveries. However, the appearance on the scene of Zgounder has definitely put Amizmiz in the shade. Maya had gone to the time and expense of putting together plans for the mine construction at this prospect but the trail has gone cold since the far more "plug and play" Zgounder project landed in its lap.

#### Azegour

The map below shows the proximity of the Azegour mine to the town of Amizmiz. In March 2011, Maya acquired the property from Ouiselsat Mines S.A., thus gaining a 100% interest in the Azegour mine and its associated mining permit 183208 covering some 16 km<sup>2</sup>.



Source: Maya

This acquisition, for around CAD\$2.5mn and 500,000 shares in Maya, strengthened the company's land position around the Azegour pluton. The Azegour permit lies directly south of the Amizmiz property and covers part of the mineralized corridor associated with the Reduced Intrusive-Related Gold System at Amizmiz that was suggested by the evaluation report on the latter property.

The past producing mine contains some quantities of molybdenum, copper and tungsten that might be exploited and sold in a form of concentrate. It was shut down in 1971 due to weakness of price of these metals. Total exploration costs spent by Ouiselsat were in the order of CAD\$4.5 million, including infrastructure which accounted for CAD\$1 mn to CAD\$2 mn. The property has never been investigated for gold and silver.

On the Azegour mine site proper, there remains a "low grade" stock pile, an embryo of a mill, a machine shop, a garage, a small tailings pond, the remnants of the old mine and mill constructions (concrete bases) and some kind of a dwelling that is also used as a guard house. A more recent processing plant was built on the ruins of what was formerly a mill. According to SGS Canada, the plant comprises a small coarse ore hopper, a 400 mm x 500 mm jaw crusher, a 3-foot short head Symons cone crusher, a 4.5 m2

vibrating screen, a 350 tonne fine ore bin, all the conveyors between the coarse ore hopper and the ball mill, a 1800 mm x 2400 mm ball mill with no motor, a 100 mm Kreb cyclone, a 1800 x 1800 mm conditioning tank and banks of flotation cells similar to the Denver DR-100 ones. Some SRL pumps are also present on a salvage yard pad. However, there are no thickeners, no filters and no concentrates storage building. The old mining and milling site is connected to a power line of 22,000 volts and a recent sub-station. Curiously the company feels that Azegour salvage could be of use in moving towards production at Amizmiz i.e. reusing ball mill, flotation cells, pumps for the mill.

#### **Imiter Bis**

The company has also added an asset called Imiter Bis to its portfolio which is in close proximity to the currently producing Imiter mine (tenth largest silver mine in the world).

The Imiter Mine, is owned and operated by Société Metallurgique d'Imiter (SMI) (a subsidiary of Managem S.A.). The Imiter Mine is located about 25 km from Boumaine du Dades in the Oriental Anti-Atlas Mountains in central Morocco. The Imiter Mine has a capacity of 300,000 metric tons per year of ore. The Imiter deposit, occurs in a similar stratigraphic position to Zgounder some 200 kilometres to the east in a separate Precambrian window. The Imiter deposit was initially worked in ancient times; it was then rediscovered in the 1950s by Pennaroya, who excavated a series of shafts and drifts, but concluded the mineralisation was of too low grade. BRPM explored the property in the 1960s and established a resource of 650,000 tonnes at 300g/t Ag.

Subsequent systematic exploration located extensive mineralisation along strike from and parallel to the known deposit. From 1985, the deposit was worked by a combination of open pitting and underground mining, producing 1.38 million tonnes of ore at an average grade of 740g/t. The stripping ratio of the open pit was 5.9:1.0 and silver recovery averaged 93%. Pittable reserves were exhausted in 1997 and production now comes entirely from the underground operation. At present, some 750-800 tonnes per day, with an average grade of 900-1,000g/t Ag, are milled, for an annual production of some 7.5 million ounces of silver.

Monday, February 13, 2012



Source: Maya

The aerial view above shows the extent of the Imiter Bis property. The producing Imiter property abuts Maya's property on the northern edge. Maya paid only CAD\$50,000 for this property though it will have to top it with another 400,000 dirhams (around CAD\$50,000) to the vendor should a minimum of 10 mn ozs of Ag be identified. The work commitment is around CAD\$100,000 before November 2012.

A report prepared for Maya on its new property described Imiter Bis as an Ag/Cu/Zn/Pb mineralization related to a brecciated and cataclastic limonitized, hematized and silicified zone carrying galena, sphalerite and chalcopyrite. The zone extends for at least 700 metres and varies in width from 1 metre to 2 metres, locally up to 10 metres. Work though has yet to begin and this represents only an exploration target at this juncture.

#### Boumaadine

The latest addition to the portfolio is a very interesting property (in our view) which is the pastproducing Boumaadine mine which in its heyday was an Au/Ag/Pb/Zn operation. The property was recently tendered out by ONHYM and Maya won the tender. The terms of the deal are that Maya will pay CAD\$2.5mn for an 85% stake with ONHYM left with a 15% interest. The work commitment is CAD\$14mn between 2012 and 2016. Maya will have to pay around USD\$1mn within one month of signing the definitive deal with the government. This puts yet another gun to the head of the company on the financing front.

This polymetallic property is considered by historians to be one of the oldest mining operations in Morocco stretching back hundreds of years. As such, it has substantial tailings also at the disposal of the new owners with 500,000 tonnes grading 125 g/t Ag and 2.38 g/t of gold. Meanwhile some 32,000 metres of drilling has been done at the property largely in the early 1990s. A non-NI43-101 resource from that period identifies 3.8 million tonnes comprised of:

- Proven reserves of 1.043 mn tonnes grading 0.77% Pb, 3.65% Zn, 186g/t Ag and 3.66 g/t Au
- "Very" probable reserves of 300,160 tonnes grading 0.85% Pb, 3.4% Zn, 185 g/t Ag and 2.3 g/t Au
- Probable reserves of 569,800 tonnes grading 0.55% Pb, 2.97% Zn, 163 g/t Ag and 1.17 g/t Au
- Possible reserves of 1.925mn with no grade shown.

These represent some interesting numbers but we consider them too sketchy to give much of an idea about the possibilities (excepting the tailings which seem an obviously attractive target). This is the first time we have heard of a category of "very probable reserves."

#### **Management & Directors**

If we have a criticism of the corporate structure it would be that the board needs less lawyers and more mining veterans. The key factor though in operating in Morocco is the presence of a local in the COO position.

Meanwhile, Guy Goulet is the President and CEO. He graduated with an engineering degree in geology from l'Ecole Polytechnique de Montreal in 1986. Mr. Goulet has sat on several boards of directors for both public and private mining companies over the past 25 years. For the period between 2000 to 2008, he was Chief Executive Officer and Chairman of the Board of H2O Innovation, the first public company with a dual listing on the TSX Venture Exchange and the Alternext Exchange in Paris. Mr. Goulet joined Maya has President in November 2008.

The key piece for Maya was its securing of Noureddine Mokaddem as Vice-President and as Chief Operating Officer & Director. This individual brings the highest level contacts in the Moroccan mining hierarchy because of his past history in which he held senior roles within YNNA Holding, ONA Group (the controlling group for Managem) and OCP Group. In those capacities he has been important in the development of several large projects and mining operations such as Akka Gold Mining and Guemassa Mining Complex in Morocco. He is a Professional Industrial Engineer and holds a B.Sc. Engineering from State School of Engineers, Mons in Belgium.

The Chairman is Réjean Gosselin, a geologist with a Masters degree in geology from the Université Laval. For more than 25 years, he has been a director and an officer of Canadian public mining companies. Prior to founding Maya Gold & Silver in 2008, Mr. Gosselin was President, CEO and Director of Dia Bras Exploration (DIB.v).

The non-executive director, John G. Booth, graduated from the University of Guelph in 1986 majoring in biology and minoring in environmental studies. He then graduated with a LLB from the University of Windsor and JD from the University of Detroit in 1989. He practiced law in Toronto before joining Merrill Lynch in 1990. In 1993, he obtained his LLM in international finance and environmental law at King's College, University of London. From 1993 to 1996, he was co-founder and director of Cedef Finance Ltd. in London and Geneva. In 1996-97, he worked as a manager of financial engineering with ABN AMRO in London and Amsterdam. He is also the non-executive Chairman of the Board of Directors of Laramide Resources (LAM.to), a non-executive Director of Tirex Resources (TXX.v, which has featured in the Model Mining Portfolio in the past) and H2O Innovation (a water-technology company listed on the TSX.V).

René Branchaud, a non-executive director, holds an LLB from Université Laval obtained in 1982. He is a partner of the law firm Lavery, de Billy. He is currently director of Malaga (MLG.to, a company we recently covered in our Tungsten round-up), and its sometime-daughter company, Dynacor Gold Mines. He is also acting as director of Dacha Capital (a company we used to like in the REE space) and Cadiscor Resources.

Another non-executive director is Friederich Roland Wismer, who holds a degree in export business from the Vienna University of Economics and Business and an MBA from the European School of Management located in Cologne, Germany. He has extensive experience of Latin America and commodities having worked for five years with Credit Suisse in Lima, New York, Mexico City, Panama City, Bogota and Zurich. From 1988 to 1995, he was the Head of Finance of Commercial Metals Company Holding AG and the Managing Director of CMC Finanz AG both in Switzerland. Since February 1995, he has been the Head of Finance of International Division of Commercial Metals Company in the United States, the Head of Finance of Commercial Metals International AG and of CMC (International) AG. During that period and still today, he served as a member of the Board of Directors of Commercial Metals International AG and on various other boards.

Martin Wong, a non-executive director, is a chartered accountant and an experienced corporate financial executive and investment banker. He holds Bachelor of Business Administration from Bishop's University and is a member of the Ordre des comptables agréés du Québec. He currently works in the Investment Banking division of Dundee Securities.

#### Finance

The company has a fairly heavy financing schedule to meet in light of the various purchases it has made in recent times. This, we believe, is one of the chief reasons for the malaise in the share price in recent times.

The most recently announced completed financing was in mid-November 2011 when the company announced the closing of a non-brokered private placement of units at a price of \$70,000 per Unit, for total gross proceeds of \$2.52mn. Each unit consisted of 300,000 common stock and 150,000 common share purchase warrants (entitling the holder to purchase one additional common share at \$0.70 at any time before December 31, 2013).

At the same time, it also completed a financing of non-convertible debentures for a principal amount of \$700,000 maturing on December 31, 2013.

The company is currently undertaking another similar "unit" sale. In this case though the interesting twist comes in that the Debentures (\$400,000 in face value) shall have their principal reimbursable by the delivery of physical silver ingots on the basis of one 10kg ingot for each tranche of \$10,000 in capital. This naturally has the proviso that should the Zgounder mine (from which, in theory, the silver would be sourced) should not be in production by the maturity date then the principal would be reimbursed in cash with interest calculated at the rate of 5% per annum.

#### Risks

The prime risks would be:

- The company has taken on a burden of payments for future property acquisitions that is quite aggressive. Meeting the payments for Zgounder should be doable but the prospect of vigorous on-going fund raisings to meet installments on the more recent transactions is clearly exacting a heavy toll on the share price. In a typical "chicken and egg" fashion this soft share price is in turn complicating the funding and making the dilution more painful.
- Moroccan political risk the country is a monarchy and the region has been swept by democratic waves of the Arab Spring over the last year. At one stage, commentators raised the possibility that Morocco too would be dragged into the discontent. The King has a close finger on the pulse though and immediately took some measures to release pent-up pressures. The souring of the mood in some of the "liberated" countries would give Moroccans pause for thought as to the attractiveness of breaking something that currently works.
- Changes in the mining rules are always a possibility in jurisdictions that are just moving into becoming more of a focus for international miners.
- > The company is very linked to silver which is not our preferred precious metal.

#### Conclusion

The attraction at Maya is its first mover status in a country that, though not new to mining, is not one in which Western mining companies have recently done anything. In light of the country's good infrastructure and, hitherto, receptiveness to Western tendencies, it should be even easier to operate a mining company here than in some of the "starter countries" in Africa. We believe that Morocco has the potential to be the next flavor in a mining community seeking novelty and fresh territory that is highly prospective. Morocco would definitely lend itself to such endeavors, in our view.

The company's well positioned COO has ensured that Maya would get "first look" at whatever properties would be made available to the private sector. This has resulted in Maya being able to amass in a short time an impressive portfolio of past producers and potential exploration properties. Of these, the Zgounder mine comes with an almost "plug and play" set-up with a suite of infrastructure and mine buildings that should be swiftly revived with minimal capex. Revenue is always a game changer in the current environment thus the company's focus must be to get production flowing.

Our main criticism of Maya would be that the tendency to regard Morocco as a treasure chest has possibly led to there being too many projects on the company's plate at the current time. We agree with management that Morocco's "turn" to be a favorite market is coming swiftly nearer, but that does not mean that being first to the feast may not cause indigestion. The eyes should not be bigger than the stomach.

We added a **Long** position to the Model Mining Portfolio in December with a 12-month price target of CAD 50cts for Maya.





#### Important disclosures

I, Christopher Ecclestone, hereby certify that the views expressed in this research report accurately reflect my personal views about the subject securities and issuers. I also certify that no part of my compensation was, is, or will be, directly or indirectly, related to the specific recommendations or view expressed in this research report.

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