

## MARCH QUARTER HIGHLIGHTS

### KEY POINTS

- ▶ **Sabodala gold production of 35,214 ounces for the quarter**
- ▶ **On track to produce 170,000 to 175,000 ounces for FY2010**
- ▶ **Since start-up in March 2009, more than 200,000 ounces of gold has been poured at Sabodala**
- ▶ **Exploration gaining strong momentum – five drill rigs in the field, promising drill intercepts at Zone D and trench results at KC Prospect on the regional land holding, and work-in-progress on multiple targets on the Mine Lease**
- ▶ **Definitive Feasibility Study for Grande Côte to be completed in May**
- ▶ **MDL to “spin off” Grande Côte via an IPO**

### OPERATIONAL OVERVIEW

#### Sabodala Gold Operation

- Gold production for the March quarter was 35,214 ounces, giving 135,266 ounces for the nine months to 31 March 2010
- Total tonnes mined for the quarter was 3.6M tonnes (708K tonnes of ore and 2,896K tonnes of waste). Production was curtailed due to the continued low availability of the mine drilling fleet (due to mechanical breakdowns and parts supply issues) as well as the primary shovel being unavailable for two weeks
- The mine drill fleet is now being increased and a specialist drilling contractor is being sourced to provide drilling services and maintenance support to improve availability
- Mill throughput for the quarter was 592K tonnes – an annualised rate which continues to be some 20% above the name plate of 2.0 Mtpa
- Gross cash operating costs (excluding royalties) were US\$575/oz – the higher amount a function of a lower level of production and the inefficiencies in the pit
- The outlook for the June quarter remains in the range of 35,000 to 40,000 ounces
- Planning for plant expansion to 3.5 Mtpa (effective mid-2011) being finalised. Orders are in place for long lead time mining equipment

#### Regional Exploration

- Exploration significantly ramped up during the quarter such that four drill rigs are now on the regional land holding of more than 1,300km<sup>2</sup>
- High grade drill results reported at Zone D, including 2m @ 25.3 g/t Au from 23m, 1m @ 147.2 g/t Au from 17m and 3m @ 23.6 g/t Au from 15m
- Trenching returned 10m @ 9.7 g/t Au at the KC prospect (Sounkounkoun Permit) – another prospect in the area with bedrock gold mineralisation
- Detailed termite mound sampling returned significant gold anomalies within the Main Transcurrent Shear Zone along strike from Randgold’s Massawa resource

#### Mine Lease Exploration

- One diamond drill rig was operational on the Mine Lease during the March quarter
- Five of the eleven targets (refer Appendix 3 for a map of the drill targets) were advanced

#### Grande Côte Mineral Sands Project

- A significant portion of work for the Definitive Feasibility Study (“DFS”) for the Project was completed during the quarter. Final Project optimisation work will see the DFS completed in May
- The anticipated total cost of the Project is now in the order of US\$400 million (including contingencies), reflecting the increased scope and current pricing of all new equipment.
- Subject to confirmation with finalisation of the DFS, the projected economics of the Project remain highly robust
- The Board of MDL has concluded that the interests of shareholders will best be met by spinning out the Project and financing it external to MDL through a separate IPO

### CORPORATE / FINANCE

- Cash and cash equivalents = US\$18m
- Project Finance facility = US\$12.0m (repaid US\$9m)
- Mining Fleet Lease facility = US\$10.6m (repaid US\$2.1m)
- Hedge Facility = 271,500 oz (at US\$846/oz) – delivered 28,500 ounces during quarter

## SABODALA GOLD OPERATION

### Production Statistics

		Mar 2010 Quarter	Dec 2009 Quarter	Sep 2009 Quarter	Jun 2009 Quarter
Ore mined	('000t)	708	820	807	854
Waste mined	('000t)	2,896	3,420	2,485	1,992
Total mined	('000t)	3,604	4,240	3,292	2,846
Strip ratio	waste/ore	4.1	4.2	3.1	2.3
Ore processed	('000t)	592	600	499	575
Head grade	(g/t)	2.05	2.63	3.66	3.27
Gold recovery	(%)	90.5	90.6	92.2	93.8
Gold produced <sup>(1)</sup>	(oz)	35,214	45,792	54,260	58,943
Gross cash costs (excl. royalties)	US\$/oz	575	532	382	350
Gross cash costs (incl. royalties)	US\$/oz	612	564	412	373
Net cash costs (after inventory adjustments, excluding royalties)	US\$/oz	565	515	393	394
Gold sold	(oz)	40,159	44,413 <sup>(2)</sup>	57,443	52,325
Average price received	US\$/oz	921	946	890	878

Notes:

(1) Gold produced is gold poured and does not include gold-in-circuit at period end

(2) Excludes 5,665 ounces shipped before period end but not converted to cash

### Performance Overview

Sabodala's March quarter production was 35,214 ounces, giving 135,266 ounces for the nine months to 31 March 2010. The output for the quarter was at the lower end of expectations – being 35,000 to 40,000 ounces – primarily a result of inadequate availability of the mining fleet (particularly the drill fleet).

Total tonnes mined for the quarter was 3.6M tonnes, comprising 708K tonnes of ore and 2,896K tonnes of waste (at a strip ratio of 4.1 waste/ore). Mine production was curtailed during the quarter as a result of the continued low availability of the mine drilling fleet (due to mechanical breakdowns and parts supply issues), as well as the primary shovel being unavailable for approximately two weeks (due to the sourcing of a replacement track cylinder adjuster).

To improve the availability of the mine drill fleet, a specialist drilling contractor is being sourced to provide drilling services and maintenance support for the company owned drills. To bolster the fleet, a fourth rig has been acquired and will be operational in early May, a replacement contract rig has been engaged which will also be in the pit from May (following the removal of the existing contract rigs due to poor performance), and two additional primary rigs (making three in total) are on order which should arrive in approximately five months.

Mill throughput for the quarter was 592,079 tonnes. Average grade for the quarter was 2.05 g/t, which was lower than anticipated due to the mining difficulties noted above.

Gross cash operating costs for the quarter were US\$575/oz excluding royalties. The increase was largely a function of the lower gold production and cost inefficiencies flowing from the mining operations.

### Outlook

Expected production for the June quarter remains in the range of 35,000 to 40,000 ounces, which would result in gold output of 170,000 to 175,000 ounces for the financial year to 30 June 2010.

### Expansion

Planning is being finalised to expand the Sabodala gold plant from a nominal capacity of 2.0 million tonnes per annum (Mtpa) to approximately 3.5 Mtpa, at an estimated capital cost of approximately US\$55 million – comprising US\$35m (including contingency) for the processing plant and associated infrastructure and US\$20m for additional mining equipment.

The proposed major equipment additions for the processing plant include a second ball mill and associated pumps and cyclones, three new leach tanks and agitators and an additional tailings thickener, with the expansion anticipated to be completed by mid-2011. The installation of a new gyratory primary crusher and reclaim system (at an estimated capital cost of approximately US\$25 million), which will lift capacity to approximately 4.0 Mtpa, is planned to be carried out as a second phase of the expansion approximately a year after completion of the first phase.

The additional mining equipment includes a third hydraulic shovel, two primary blast hole drill rigs, five haul trucks and two dozers – all of which are now on order, with expected delivery by the end of 2010.

Upon completion of the expanded operations to a nominal capacity of approximately 3.5Mtpa throughput, it is expected gold output will increase to an average of approximately 185,000 ounces per annum.

## SABODALA GOLD OPERATION

### Exploration

#### Regional Exploration

The exploration program on the Regional land holding significantly ramped up during the March quarter with four drill rigs now in operation – three RAB rigs and one multipurpose RC/diamond rig.

MDL now has a 100% interest, with a 2% royalty payable, in both the Dembala Berola (244km<sup>2</sup>) and Massakounda (186km<sup>2</sup>) permits, following the acquisition of the joint venture partner's interest. With the granting 100% of a new permit, Saiansoutou (81km<sup>2</sup>), which adjoins Dembala Berola, and the relinquishment of portions of existing permits, MDL now holds a land package of 1,337km<sup>2</sup> of highly prospective Birimian terrain in south eastern Senegal.

A map providing an overview of the regional holding and the current prospects is attached as Appendix 1.

Exploration highlights during the quarter comprised:

**Zone D (Sounkounkoun Permit):** commencement of approximately 3,500m of RC drilling is indicating the potential for a high grade resource comprised of a multiple lode system. Intersections to date include:

- SKRC001: 2m @ 25.3 g/t Au from 23m, 2m @ 1.8 g/t Au from 28m, 3m @ 1.0 g/t Au from 92m, 2m @ 1.7 g/t Au from 106m and 4m @ 1.3 g/t Au from 110m to end of hole at 114m
- SKRC006: 1m @ 147.2 g/t Au from 17m and 2m @ 10.0 g/t Au from 69m
- SKRC008: 4m @ 1.8 g/t Au from 8m, 3m @ 23.6 g/t Au from 15m and 1m @ 1.1 g/t Au from 100m

Drill hole collar details are provided in Appendix 2.

**KC Prospect (Sounkounkoun Permit):** trenching in the north west of the Sounkounkoun Permit continues to define bedrock gold mineralisation at multiple prospects, such as 10m @ 11.3 g/t Au at the KC prospect where follow up RAB drilling is now proposed

**Diegoun (Sounkounkoun permit) and NW Dembala Berola Permit:** detailed termite mound sampling returned significant gold anomalies (defined by the 120ppb threshold). The area is within the Main Transcurrent Shear Zone along strike from Randgold's 3.5M ounce Massawa resource. Most of the anomalies coincide with good structural settings. Follow up RAB drilling is being prioritised.

**Diadiako (Branson Permit):** 40 RAB holes for 1,324m and 9 RC holes for 909m were drilled to evaluate Sabodala style mineralisation. Numerous intercepts were reported providing evidence for multiple lodes at depth. Intersections included:

- BSRC029: 4m @ 0.9 g/t Au from 77m, 3m @ 0.7 g/t Au from 90m and 1m @ 34.0 g/t Au from 117m
- BSRC024: 6m @ 2.3 g/t Au from 27m
- BSRB473: 3m @ 5.1 g/t Au from 32m
- BSRB738: 2m @ 6.3 g/t Au from 26m

Potential exists for an open pit development of higher grade shoots. Further RC drilling is planned.

**Majiva (Makana Permit):** 388 RAB holes for 9,000m were completed. Late in the quarter RAB drilling was in progress which is focused on delineation of a major structural target where best results to date are:

- MKRB0288: 8m @ 0.4 g/t Au from 4m
- MKRB0361: 16m @ 0.6 g/t Au from 2m

**Goundamehko (Dembala Berola permit):** Additional trenching has extended the strike of known mineralisation. A zone of some 40m x 800m includes previous RC intersections such as 20m @ 1.3 g/t Au, 8m @ 1.5 g/t Au, 34m @ 0.8 g/t Au and 4m @ 28.3 g/t Au on a cross structure. Trenching includes 2m @ 41.0 g/t Au in trench GTR024. This target warrants systematic RC drilling with the goal of defining a mineable bulk tonnage deposit.

**Saiansoutou prospect** (north east corner of Dembala Berola permit): trenching returned some high grade results including 2m at 18 g/t Au and also 6m @ 3 g/t Au in trench SATR003B. RAB follow up is proposed.

**Note: RAB drilling results are not used for resource estimation and are an indication only for the presence or absence of gold.**

#### Mine Lease Exploration

One diamond drill rig was operational on the Mine Lease during the March quarter. Five of the eleven targets (refer Appendix 3 for a map of the drill targets) were advanced:

**Sutuba (#8):** drill holes testing the geological model confirmed the existence of previously mapped out NE trending structures, but a new set of NW trending mineralised structure is being recognised.

**Soukhoto (#11):** a diamond drill hole program has provided a better understanding of the source of the mineralisation and structural framework, which will allow better targeting of zones for an RC program.

**Falombou (#2):** work has confirmed mineralisation along the Sabodala Mylonite. This new zone and other anomalies along the Mylonite will be tested both along strike and at depth.

**Masato Extension (#9):** Diamond drilling has delineated the extents of the structure which will aid in better targeting for an RC program.

**Sabodala Main Flat Extension (#6):** Diamond drilling is in progress to confirm the extension of the Main Flat Zone

## GRANDE CÔTE MINERAL SANDS PROJECT

A significant proportion of the work for the independently compiled Definitive Feasibility Study (DFS) for the Grande Côte Mineral Sands Project in Senegal was completed during the March quarter. The DFS will be concluded in May following final project optimisation work, primarily involving additional infill drilling being undertaken in the Lompoul region of the Mining Concession which is being used as the basis for development of a dredge path for the initial 14 years of operation.

The anticipated total cost of the Grande Côte Project is now in the order of US\$400 million (including contingencies), reflecting the increased scope and current pricing of all new equipment.

On account of the size of the Grande Côte Project and ongoing development potential at the company's Sabodala gold mine, the Board of MDL has concluded that the interests of shareholders will best be met by spinning out the Grande Côte Project and financing it external to MDL through a separate IPO. The Board has mandated management to appoint advisers to advance this key initiative.

The Grande Côte Project scope now provides for the production of both zircon and ilmenite as the main products, with minor quantities of rutile and leucoxene. Previously, the focus was on the production of only zircon as the main output. Recent testwork has demonstrated that with a revised circuit/flowsheet, a good quality ilmenite product can be produced, in addition to an excellent quality zircon product (which should attract premium pricing). New generation spirals have also improved zircon recoveries by approximately 5% from previous results.

The US\$400 million estimated capital cost of the Grande Côte Project is also based on current pricing of all new equipment (previously it was intended to re-use some of the equipment from the earlier Australian operations) and the experience gained from the recent construction of the Sabodala gold operation also in Senegal. It incorporates a 28MW heavy fuel oil power station (similar to that built at Sabodala), a rail spur and rolling stock for bulk material movement and owner costs.

Substantial capital savings are provided by the existence of significant infrastructure which is available for use by the Project. Such infrastructure includes:

- a nearby highway for transportation of the zircon to port via container;
- a railway line for transporting the ilmenite to port in bulk (although it is anticipated a rail spur will be required at the site); and
- a deep water port at Dakar with rail access and various existing options in relation to facilities for bulk material ship loading.

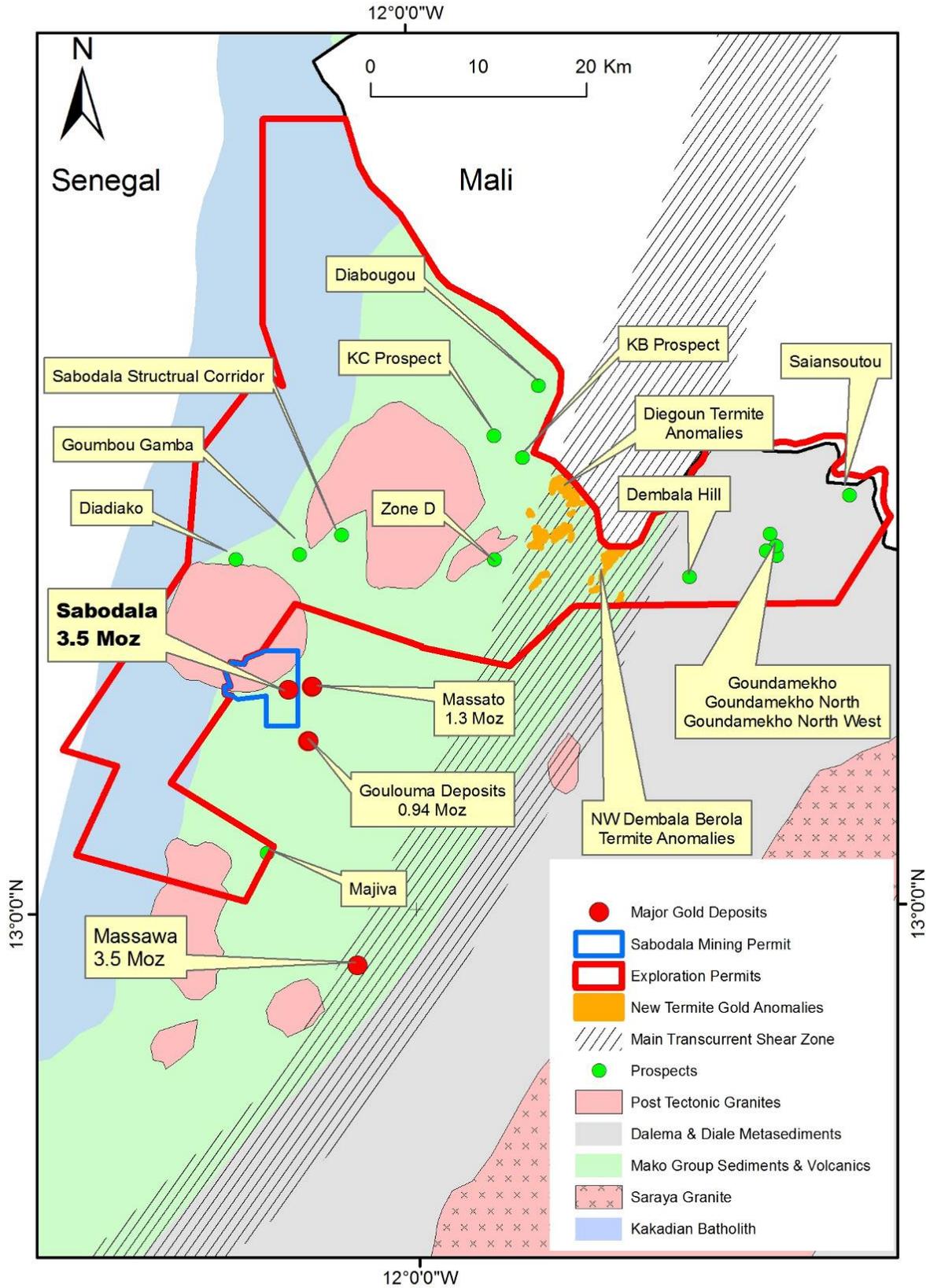
The ore body size and characteristics (no overburden, free flowing sands, minor vegetation, minimal slimes and no hard lenses) provide for a large scale, low cost dredging operation – using conventional technologies similar to MDL's previous operations. Anticipated annual production, based on 48 -50 million tonnes per annum of dredge/floating concentrator throughput, is approximately:

- 75,000 – 80,000 tonnes of zircon;
- 550,000 – 600,000 tonnes of ilmenite;
- 6,000 tonnes of rutile; and
- 9,000 tonnes of leucoxene.

Current expectations are for Heavy Mineral grades averaging 1.7%-1.8% over the initial 14 years of operation. The dredge path for this initial period of operation will cover an area representing approximately 40% of the Mining Concession. Accordingly, a mine life of at least 25 years is supported by the global resource.

From a market entry perspective, the projected timing of the Project coming on stream in early 2013 is predicted to coincide with a shortfall in supply compared to demand for both zircon and ilmenite.

**Appendix 1: SABODALA REGIONAL LAND HOLDING**

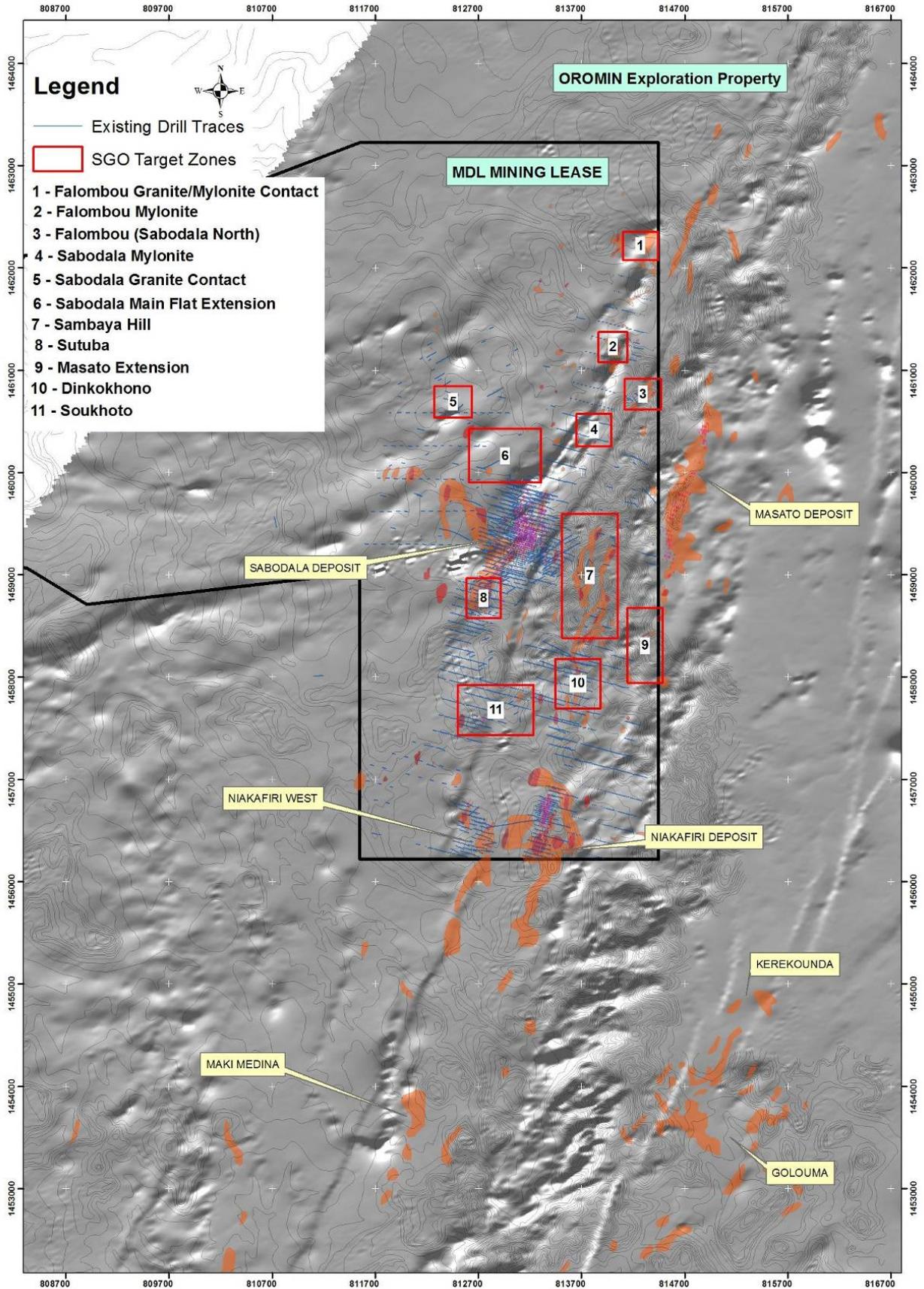


## Appendix 2: ZONE D Drill Hole Location Details

HOLEID	DEPTH	Azimuth	Dip	EAST	NORTH	Intercepts
SKRC001	120	310	-60	182304	1471592	2m @ 25.3 g/t Au from 23m 2m @ 1.8 g/t Au from 28m 3m @ 1.0 g/t Au from 92m 2m @ 1.7 g/t Au from 106m 4m @ 1.3 g/t Au from 110m
SKRC002	123	310	-60	182406	1471778	4m @ 1.7 g/t Au from 35m
SKRC003	121	310	-60	182275	1471553	None
SKRC004	124	310	-60	182323	1471566	1m @ 5g/t Au from 48m
SKRC005	124	310	-60	182311	1471623	None
SKRC006	123	310	-60	182450	1471750	1m @ 147.2 g/t Au from 17m 2m @ 10.0 g/t Au from 69m
SKRC007	123	310	-60	182483	1471992	1m @ 3.3 g/t Au from 30m
SKRC008	120	310	-50	182545	1472117	4m @ 1.8 g/t Au from 8m 3m @ 23.6 g/t Au from 15m 1m @ 1.1 g/t Au from 100m
SKRC009	120	310	-50	182604	1472079	1m @ 5.4 g/t Au from 60m

Note: intersections calculated at 0.5 g/t Au cut-off

**Appendix 3: Mine Lease Drill Targets**



## CORPORATE INFORMATION

### Corporate Directory

#### Directors

**Nic Limb**, Executive Chairman  
**Jeff Williams**, Managing Director  
**Martin Ackland**, Executive Director  
**Clever Fonseca**, Executive Director  
**Robert Danchin**, Deputy Chairman, Non-Executive Director  
**David Isles**, Non-Executive Director  
**Oliver Lennox-King**, Non-Executive Director  
**Murray Grant**, Non-Executive Director

#### Senior Management

**Rick Sharp**, Chief Financial Officer  
**Melvyn Drummond**, Company Secretary

#### Registered Office

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#### Auditor

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#### Share Registries

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#### Stock Exchange Listings

Australian Securities Exchange, ASX code: **MDL**  
 Toronto Stock Exchange, TSX code: **MDM**

### Issued Capital

	Mar'10
Issued shares	573,625,950
Unlisted options	35,350,000

### Unlisted Options – Exercise Profile

Exercise Price (A\$)	Options (m)
\$0.69 - \$0.85	5.750
\$1.40	20.000
\$1.60	9.350
\$2.00	0.250
<b>VWAP = \$1.35</b>	<b>35.350</b>

### About MDL

Mineral Deposits Limited is an ASX and TSX listed mining company with a current focus in Senegal, West Africa through a producing gold mine, the Sabodala Gold Operation, and a to be developed mineral sands project, the Grande Côte Mineral Sands Project.

The Sabodala Gold Operation, which poured its first gold in March 2009, is located 650 kilometres east of the capital Dakar within the West African Birimian geological belt in Senegal, and about 90 kilometres from major gold mines and discoveries in Mali. The area has only recently been opened for mining and exploration and is emerging as a significant new gold camp, with more than 10M ounces of resources already discovered.

The Grande Côte Mineral Sands Project is located on the coast of Senegal starting approximately 50 kilometres north of Dakar and extending northwards for more than 100 kilometres. The large scale of the ore body and the high quality of the zircon provides the potential to establish an operation of international significance.

Senegal is one of Africa's most successful democracies, having gained independence in 1960. It enjoys a stable and investor friendly political and social environment. The government of the Republic of Senegal is MDL's valued partner and holds a 10% free carried interest in both projects, which will accrue dividends once MDL has recovered its capital invested.

### Forward Looking Statements

Certain information contained in this report, including any information on MDL's plans or future financial or operating performance and other statements that express management's expectations or estimates of future performance, constitute forward-looking statements. Such statements are based on a number of estimates and assumptions that, while considered reasonable by management at the time, are subject to significant business, economic and competitive uncertainties. MDL cautions that such statements involve known and unknown risks, uncertainties and other factors that may cause the actual financial results, performance or achievements of MDL to be materially different from the company's estimated future results, performance or achievements expressed or implied by those forward-looking statements. These factors include the inherent risks involved in exploration and development of mineral properties, changes in economic conditions, changes in the worldwide price of gold, zircon, ilmenite and other key inputs, changes in mine plans and other factors, such as project execution delays, many of which are beyond the control of MDL.

Nothing in this report should be construed as either an offer to sell or a solicitation to buy or sell MDL securities.

### Competent Persons Statement

The information in this report that relates to Exploration Results is based on information compiled by Mineral Deposit Limited's Chief Geologist, Chris Young BSc, who is a member of The Australasian Institute of Mining and Metallurgy and the Australian Institute of Geoscientists. Mr Young has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration and to the activity undertaken. He is qualified as a Competent Person as defined in the 2004 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves" and as defined in NI43-101. Mr Young has consented to the inclusion of this information in the form and context in which it appears in this report.

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