



Merlin Diamonds Limited

ABN 86 009 153 119

31 January 2018

Manager Companies
Australian Securities Exchange
Level 6, 20 Bridge Street
Sydney NSW 2000

By E-Lodgement

REPORT FOR THE QUARTER ENDED 31 DECEMBER 2017

Merlin Diamonds Limited
ABN 86 009 153 119

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Directors

Mr Mordechai Gutnick
Chairman & Managing Director

Mr Henry Herzog
Non-Executive Director

Dr David S Tyrwhitt
Non-Executive Director

Senior Management

Mr Peter Lee
CFO & Company Secretary

HIGHLIGHTS

Merlin Mine –Operations

- **The Tomra XRT machine was installed on site, commissioned and processing commenced in late December 2017.**
- **The Tomra XRT machine will be fully operational in all fractions in early February 2018.**
- **Gwain and Ector pits being dewatered with focus on Gwain after wet season because of its high grade and significant profitability.**
- **Plans to purchase a new scrubber/trommel for the beginning of full mining operations at Gwain are in process**
- **Largest diamond recovered during quarter was an 18.75 flawless cognac diamond (see attached picture)**
- **Installed wet screen to assist in processing significant amounts of stockpiles which remained from Rio Tinto's previous production at Merlin (see attached picture).**
- **Mobile screening plant acquired to separate ore in different fractions (see attached picture).**
- **Machinery for use in the mining and processing operations has been delivered to site.**

Planned activities in March 2018 quarter

- **Merlin is opening a diamond sales office in Antwerp. Polished diamonds from previous production will be sold together with**



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rough diamonds recovered through the use of the Tomra XRT machine

- **Processing flow sort tails concentrates from previous years' production for flawless type 11A diamond non fluorescent diamonds already evident in last years' production.**



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MERLIN DIAMOND MINE PROJECT

Merlin Diamond Mine Operations

1. MINING OPERATIONS UPDATE

Merlin announced in its September 2017 quarterly report that the decision had been made to acquire a Tomra XRT machine to improve the recovery of diamonds. By using this new sorting technology, it is expected that larger diamonds will be recovered than previously possible as well as recovering low luminescing diamonds that were difficult to recover using previously used sorting technology. The use of the Tomra XRT machine will significantly lower operating costs.

During the current quarter, the Tomra XRT machine was delivered to site, commissioned and commenced processing late in December 2017. The installation of the plant included significant earthworks and construction including modification to existing equipment on site.

Heavy machinery for use in mining and processing operations has also been delivered to site, this includes a loader, dumptruck, excavator, rock breaker, crane and skid steer loader.

The Gwain and Ector pipes are being dewatered in order for mining operations to commence following the wet season. The priority is Gwain pit due to its high grade ore and significant profitability.

Officials from Tomra are visiting Merlin for a second time in early February 2018 to complete calibration of the XRT machine on the smaller size fractions, not only +20mm.

2. TOMRA XRT MACHINE TO ENHANCE RECOVERY OF LARGER DIAMONDS AT MERLIN

Following consultation and engagement with leading diamond industry experts the installation of a Tomra XRT machine was strongly recommended. The Company purchased and paid for in full the Tomra XRT machine and installation and commissioning occurred during the December 2017 quarter.

The Tomra XRT machine recovery solutions replace the conventional concentration and recovery stages such as Dense Media Separation (DMS) and X-Ray Luminescence (XRL) sorting in a diamond recovery process.

Advanced [X-Ray transmission technology \(XRT\)](#) reliably detects all diamonds including coated, low-luminescent and Type II diamonds.

Being integrated at the earliest stage of the recovery process, TOMRA Sorting's advanced XRT equipment considerably simplifies the flow sheet thereby reducing the risk of diamond damage.



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Advantages of Tomra's sorters include:

- Compact footprint,
- Low operating costs,
- High diamond recovery rates and
- Extremely low concentrate yields.

The integration of automated sorting allows the overall complexity of recovery plants to be reduced, resulting in lower capital and operating costs. There is no need to further process a sorter's concentrate before final hand sorting.

The large Tomra XRT machine is the latest state of the art sorting machine and has been used by Lucara Diamond Corp (TSE: LUC) to find large diamonds (the largest diamond recovered is 1,100 carats which is the second largest diamond ever recovered).

Rationale for Tomra XRT machine

The Merlin diamond mine is famous for its large high quality diamonds. Australia's largest diamond, 104 carats, was found at Merlin as well as a 43 carat, 32 carat, and 28 carat diamond. In addition up to 2,000 diamonds larger than five carats were found at Merlin.

In recent production, 37 diamonds above five carats were produced from only 86,407 tonnes of ore, of which 15 diamonds are above 10 carats with the largest diamond being 35.74 carats.

Leading Diamond Industry consultants strongly recommend the purchase of a Tomra Large Diamond XRT Machine for use in future production because of its compact footprint, low operating costs, high recovery rates and extremely low concentration yields. This will be beneficial to the Company given the number of high quality large stones at Merlin.

The highest distribution and amount of larger diamonds are found in the northern cluster more so than the other eleven kimberlite pipes at Merlin.

The Ector kimberlite pipe at Merlin has the highest proportion of larger stones than any other of the pipes. The 104 carat diamond (likely half a stone) was found in the Northern Cluster of which Ector is one of them. Ector is at a depth of only 30 metres. Current open pits depths range between 30-100 metres. Core drill holes has found kimberlite as deep as 718 metres at Palsac.

With the recent outstanding successes at Lucara following the implementation of the state of the art XRT sorting machines to recover very large diamonds it is obvious that the Company will benefit from the purchase and use of Tomra XRT machines for production at Merlin.

The amount of large diamonds in proportion to the tonnage processed makes Merlin a perfect fit to recover very large diamonds. The Tomra XRT machine allows larger diamonds to be captured before the crushing process (which may reduce the size of diamonds recovered as they are crushed) or



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sorting process which may result in diamonds being transferred to non-fluoro or oversized material stockpiles.

Very few mines in the world have the proportion of high quality large diamonds like Merlin.

Therefore, the use of the Tomra XRT machine should prove Merlin to be a world class deposit.

The information in this report is based on information compiled by Dr DS Tyrwhitt who is a Fellow of the Australasian Institute of Mining and Metallurgy. Dr DS Tyrwhitt is a consulting geologist employed by DS Tyrwhitt & Associates Pty Ltd. Dr DS Tyrwhitt is a director of Merlin Diamonds Limited, has 50 years' experience in the industry and has more than 5 years' experience which is relevant to the style of mineralisation being reported upon to qualify as a Competent Person as defined in the 2012 Edition of the "Australasian Code of Reporting of Exploration Results, Mineral Resources and Ore Reserves". Dr Tyrwhitt consents to the inclusion in the report of the matters based on the information in the form and context to which it appears. Attached is a copy of the Company's Mining Exploration Entity Quarterly Report in accordance with Listing Rule 5.3.



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Table 1: Merlin Diamonds Limited Tenement Interests

Tenement	Project	State	Holder	Status	% Interest (Start of Quarter)	% Interest (End of Quarter)
EL26944	Merlin Orbit	NT	Merlin Operations Pty Ltd	Granted	100%	100%
M80/526	Seppelt	WA	Merlin Diamonds Limited	Granted	100%	100%
M80/532	Seppelt	WA	Merlin Diamonds Limited	Granted	100%	100%
M80/492	Ashmore	WA	Striker Diamonds P/L	Granted	100%	100%
MLN1154	Merlin	NT	Merlin Operations Pty Ltd	Granted	100%	100%
EL10189	Merlin Orbit	NT	Merlin Operations Pty Ltd	Granted	100% Diamond rights only	100% Diamond rights only
EL26206	Arnhem Land	NT	Merlin Diamonds Limited	Granted	100% Diamond rights only	100% Diamond rights only
EL28066	Arnhem Land	NT	Merlin Diamonds Limited	Application	100% Diamond rights only	0%
EL28067	Arnhem Land	NT	Merlin Diamonds Limited	Application	100% Diamond rights only	0%
EL28068	Arnhem Land	NT	Merlin Diamonds Limited	Application	100% Diamond rights only	0%
EL6532	Arnhem Land	NT	Rio Tinto Pty Ltd	Application	100% Diamond rights only	100% Diamond rights only
EL8681	Arnhem Land	NT	Rio Tinto Pty Ltd	Application	100% Diamond rights only	100% Diamond rights only
EL8682	Arnhem Land	NT	Rio Tinto Pty Ltd	Application	100% Diamond rights only	100% Diamond rights only



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OVERVIEW OF TOMRA XRT PROCESSING CIRCUIT



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**MOBILE SCREENING PLANT FULLY PURCHASED BY
MERLIN**



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RECOVERING RIO TINTO TROMMEL OVERSIZE FROM
EARLY 2000'S



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NEW WET SCREEN ADDITION TO TOMRA CIRCUIT



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GAWAIN IN PROCESS OF DEWATERING



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TOMRA XRT MACHINE



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STUNNING COGNAC FLAWLESS 18.7ct DIAMOND

Appendix 5B

Mining exploration entity and oil and gas exploration entity quarterly report

Introduced 01/07/96 Origin Appendix 8 Amended 01/07/97, 01/07/98, 30/09/01, 01/06/10, 17/12/10, 01/05/13, 01/09/16

Name of entity

MERLIN DIAMONDS LIMITED

ABN

86 009 153 119

Quarter ended ("current quarter")

31 December 2017

Consolidated statement of cash flows	Current quarter \$A'000	Year to date (6 months) \$A'000
1. Cash flows from operating activities		
1.1 Receipts from customers	-	-
1.2 Payments for		
(a) exploration & evaluation	(246)	(344)
(b) development	-	-
(c) production	-	-
(d) staff costs	(46)	(77)
(e) administration and corporate costs	(677)	(1,257)
1.3 Dividends received (see note 3)	-	-
1.4 Interest received	-	-
1.5 Interest and other costs of finance paid	(219)	(236)
1.6 Income taxes paid	-	-
1.7 Research and development refunds	-	-
1.8 Other (GST Refund, Fuel Rebate Refund)	280	280
1.9 Net cash from / (used in) operating activities	(908)	(1,634)

2. Cash flows from investing activities		
2.1 Payments to acquire:		
(a) property, plant and equipment	(373)	(1,338)
(b) tenements (see item 10)	-	-
(c) investments	-	-
(d) other non-current assets	-	-

Consolidated statement of cash flows		Current quarter \$A'000	Year to date (6 months) \$A'000
2.2	Proceeds from the disposal of:		
	(a) property, plant and equipment	-	-
	(b) tenements (see item 10)	-	-
	(c) investments	-	-
	(d) other non-current assets	-	-
2.3	Cash flows from loans to other entities	(2)	(102)
2.4	Dividends received (see note 3)		
2.5	Payments for development expenditure	(1,452)	(1,687)
2.6	Other (Environmental Bond)	-	-
2.7	Net cash from / (used in) investing activities	(1,827)	(3,127)

3.	Cash flows from financing activities		
3.1	Proceeds from issues of shares	3,943	3,943
3.2	Proceeds from issue of convertible notes	645	2,601
3.3	Proceeds from exercise of share options	-	-
3.4	Transaction costs related to issues of shares, convertible notes or options	-	-
3.5	Proceeds from borrowings	627	1,122
3.6	Repayment of borrowings	(772)	(882)
3.7	Transaction costs related to loans and borrowings	-	-
3.8	Dividends paid	-	-
3.9	Other (transaction costs re issue of shares)	(26)	(33)
3.10	Net cash from / (used in) financing activities	4,417	6,751

4.	Net increase / (decrease) in cash and cash equivalents for the period		
4.1	Cash and cash equivalents at beginning of period	325	17
4.2	Net cash from / (used in) operating activities (item 1.9 above)	(908)	(1,634)
4.3	Net cash from / (used in) investing activities (item 2.6 above)	(1,827)	(3,127)
4.4	Net cash from / (used in) financing activities (item 3.10 above)	4,417	6,751
4.5	Effect of movement in exchange rates on cash held	-	-
4.6	Cash and cash equivalents at end of period	2,007	2,007

5. Reconciliation of cash and cash equivalents at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts	Current quarter \$A'000	Previous quarter \$A'000
5.1 Bank balances	2,007	325
5.2 Call deposits	-	-
5.3 Bank overdrafts	-	-
5.4 Other (provide details)	-	-
5.5 Cash and cash equivalents at end of quarter (should equal item 4.6 above)	2,007	325

6. Payments to directors of the entity and their associates	Current quarter \$A'000
6.1 Aggregate amount of payments to these parties included in item 1.2	18
6.2 Aggregate amount of cash flow from loans to these parties included in item 2.3	-
6.3 Include below any explanation necessary to understand the transactions included in items 6.1 and 6.2	

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7. Payments to related entities of the entity and their associates	Current quarter \$A'000
7.1 Aggregate amount of payments to these parties included in item 1.2	-
7.2 Aggregate amount of cash flow from loans to these parties included in item 2.3	-
7.3 Include below any explanation necessary to understand the transactions included in items 7.1 and 7.2	

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8. Financing facilities available <i>Add notes as necessary for an understanding of the position</i>	Total facility amount at quarter end \$A'000	Amount drawn at quarter end \$A'000
8.1 Loan facilities	-	-
8.2 Credit standby arrangements	-	-
8.3 Other (please specify)	-	-
8.4 Include below a description of each facility above, including the lender, interest rate and whether it is secured or unsecured. If any additional facilities have been entered into or are proposed to be entered into after quarter end, include details of those facilities as well.		

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9. Estimated cash outflows for next quarter	\$A'000
9.1 Exploration and evaluation	50
9.2 Development	1,000 inc production
9.3 Production	-
9.4 Staff costs	90
9.5 Administration and corporate costs	400
9.6 Other (provide details if material)	
9.7 Total estimated cash outflows	1,540

10. Changes in tenements (items 2.1(b) and 2.2(b) above)	Tenement reference and location	Nature of interest	Interest at beginning of quarter	Interest at end of quarter
10.1 Interests in mining tenements and petroleum tenements lapsed, relinquished or reduced	-	Refer table 1 of quarterly report.	-	-
10.2 Interests in mining tenements and petroleum tenements acquired or increased	-	-	-	-

Compliance statement

- 1 This statement has been prepared in accordance with accounting standards and policies which comply with Listing Rule 19.11A.
- 2 This statement gives a true and fair view of the matters disclosed.



Sign here:
(Company Secretary)

Date: 31 January 2018

Print name: Peter Lee

Notes

1. The quarterly report provides a basis for informing the market how the entity's activities have been financed for the past quarter and the effect on its cash position. An entity that wishes to disclose additional information is encouraged to do so, in a note or notes included in or attached to this report.
2. If this quarterly report has been prepared in accordance with Australian Accounting Standards, the definitions in, and provisions of, AASB 6: Exploration for and Evaluation of Mineral Resources and AASB 107: Statement of Cash Flows apply to this report. If this quarterly report

Mining exploration entity and oil and gas exploration entity quarterly report

has been prepared in accordance with other accounting standards agreed by ASX pursuant to Listing Rule 19.11A, the corresponding equivalent standards apply to this report.

3. Dividends received may be classified either as cash flows from operating activities or cash flows from investing activities, depending on the accounting policy of the entity.