



NIAGARA

MINING LIMITED

ABN 60 060 525 206

Unit 8, Level 1, Churchill Court
331-335 Hay Street
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PO Box 190
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Tel: +61 8 9382 8799
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31 July 2006

Company Announcements Officer
Australian Stock Exchange Limited
Exchange Centre
Level 4, 20 Bridge Street
SYDNEY NSW 2000

www.asxonline.com

Dear Sir

RE: QUARTERLY REPORT PERIOD END 30 JUNE 2006

We enclose herewith a copy of an announcement in relation to the above.

Yours faithfully

Douglas C. Daws
EXECUTIVE CHAIRMAN

Enc

CORPORATE DIRECTORY

Director / Senior Management

Douglas Daws	Executive Chairman
Chris Daws	Chief Executive Officer
Bruno Sceresini	Non-Executive Director
Peter Landau	Non-Executive Director
Ross Kestel	Company Secretary

Corporate Enquiries

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E: david.griffiths@gryphon.net.au

Shareholder Enquiries

Enquiries concerning shareholdings should be addressed to:
Computershare Investor Securities
GPO Box D182, Perth WA 6840
Tel: 61 8 9323 2000

Registered Office

Level 1, South Mill Centre
9 Bowman Street
South Perth WA 6151
Tel: 61 8 9367 8133
Fax: 61 8 9367 8812

Principal Office

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Home Exchange

The Company's shares are listed on the Australian Stock Exchange and the home exchange is Perth ASX code: NIA

Website Address

www.niagamining.com.au



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ASX Announcement

31 July 2006

QUARTERLY REPORT FOR THE PERIOD ENDED 30 JUNE 2006

HIGHLIGHTS

- **Geophysical technologies successful in delineating and discerning nickel sulphide mineralisation (WNP)**
- **High order Mobile Metal Ion (MMI) anomaly recorded at Poseidon surface TEM target area.**
- **Drilling identifies new high tenor nickel sulphide system at Sub Zero surface TEM target area (WNP)**
- **South Windarra heap leach test work continues to encourage early development decision (WNP)**
- **WNP data indicates potential to retreat +3million tonnes gold tailings at greater than 1g/t Au (+100,000ozs Au)**
- **Full WNP data transfer completed and construction of digital data base reaches +300 diamond drill holes**

REVIEW OF OPERATIONS

The Company continued to be active during the period ended 30 June 2006 within project areas in Australia at the Windarra Nickel Project (WNP) and overseas in Ghana West Africa at the Salman South Gold Project (formally Dadwen Gold Project). A number of exploration and field work programs continued with very positive results.

Nickel

Windarra Nickel Project (WNP), Laverton W.A.

AM 70/260, G38/21 (100%), includes ML 38/1243, ML 38/1244, ML 38/1245 (applications)

The WNP data transfer was 100% complete at quarter's end and Niagara's digital data base is rapidly building. To date over 300 diamond drill holes have been captured in the digital data base. Digitisation of the historic Mt Windarra mine development utilising level plans and cross-sectional plans transferred from WMC Resources to the Company has also been undertaken during the quarter, which will greatly assist future exploration and development planning. It is still expected to be



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many more months before the most relevant items are processed and placed into a modern computerised geological database.

During the quarter the Company continued to progress the installation of basic infrastructure at the Mt Windarra mine site area. Effective communication lines were established over the quarter with voice and data transmission now possible. Recovery and re-grading of an emergency airstrip at the Mt Windarra mine was also completed during the quarter.

The Company has entered into an option agreement with Goldfields Limited during the quarter to purchase the Junction winder and ore haulage system located at the St Ives gold mining operation at Kambalda, W.A. It is envisaged that the system will be required for the future re-development of the Mt Windarra nickel mine. The infrastructure includes headframe with ore handling system, ore haulage skips, winder house, electrical transformers and numerous spares including winder ropes (new and used) and a new 600Kw Toshiba motor. The Junction winder has a rated depth capacity in excess of 900m. The estimated replacement value of the infrastructure is over A\$8,000,000.

Mt Windarra

The Company targeted high tenor massive nickel sulphide mineralisation situated approximately 150 metres below the previous WMC mine development at Mt Windarra with great success during the March 06 quarter. The Company announced on 20th and 24th March 2006 that the first diamond drill hole drilled by the Company on the WNP, NMD0001, had intersected a thick high tenor massive nickel sulphide zone:

**9.82 metres @ 6.06% Ni (686.16 – 695.98m)
including 4.62 metres @ 10.33% Ni (691.36 – 695.98m)**

During the June 06 quarter a survey was undertaken to identify the extent of the nickel mineralisation intersected by NMD0001 using down hole TEM (DHTEM). The surveying of NMD0001 has been very successful in delineating a sizeable conductive unit (~35-50 metres in width with significant plunge extent) coincident with the intersected high tenor, massive nickel sulphide. It is important to note that the geophysical technology utilised by the Company has been able to discern and identify the nickeliferous sulphides from the barren sediment-hosted sulphides intersected at greater depths in NMD0001 and that this technology has never before been used by previous operators at the WNP site. The attached image in Plan 1 highlights the current DHTEM interpretation of NMD0001 with the first diamond drill wedge target shown where it intersects the indicated nickel mineralisation. This initial wedge hole is currently being drilled and is due to be completed in the current quarter. It is anticipated that up to four or five wedge holes may be drilled from NMD0001 targeting the massive nickel sulphide mineralisation dependent upon successful outcomes and results of ongoing DHTEM surveys of the drilled wedge holes.

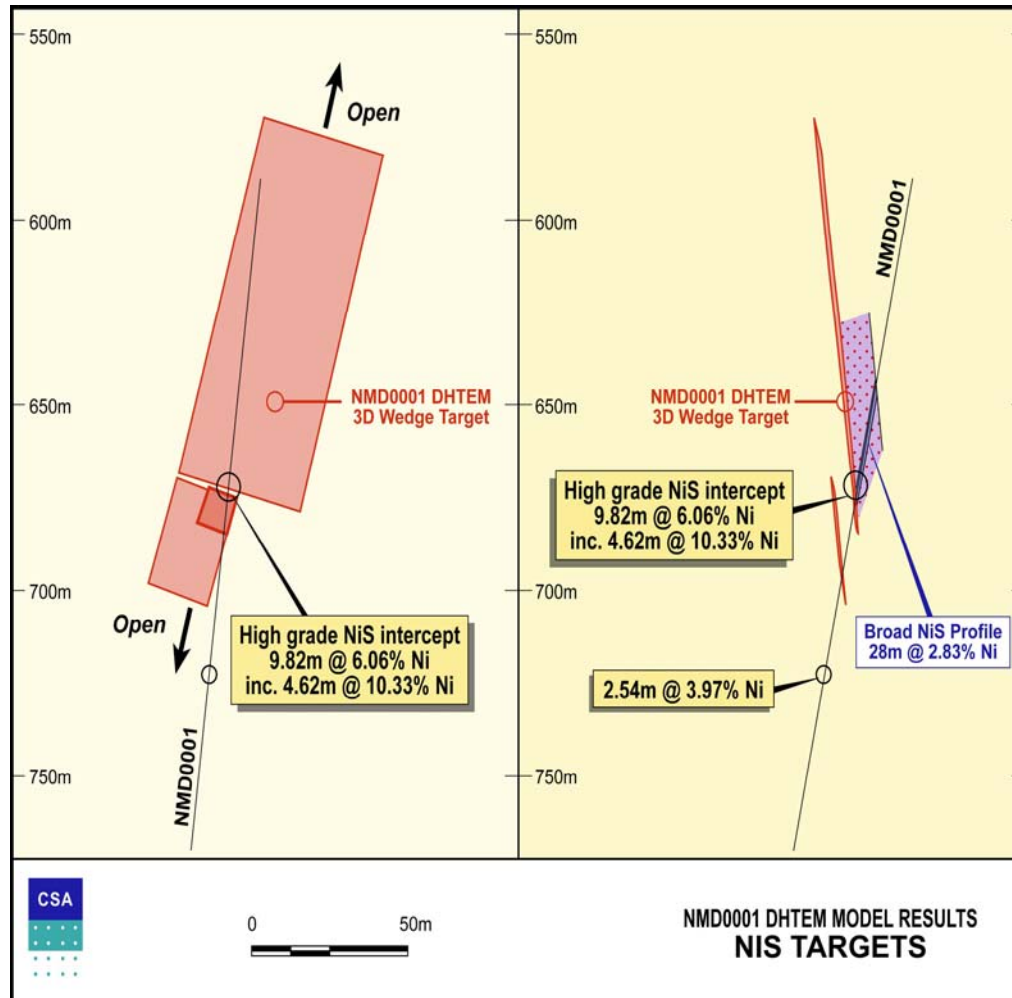


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Plan 1: NMD0001 with conductor plates and planned wedge hole target

The analytical and geophysical results of NMD0001 confirm our belief in the region and this project, and that a high tenor massive nickel sulphide ore body can be discovered within the WNP area with the application of advanced modern geophysical exploration methods.

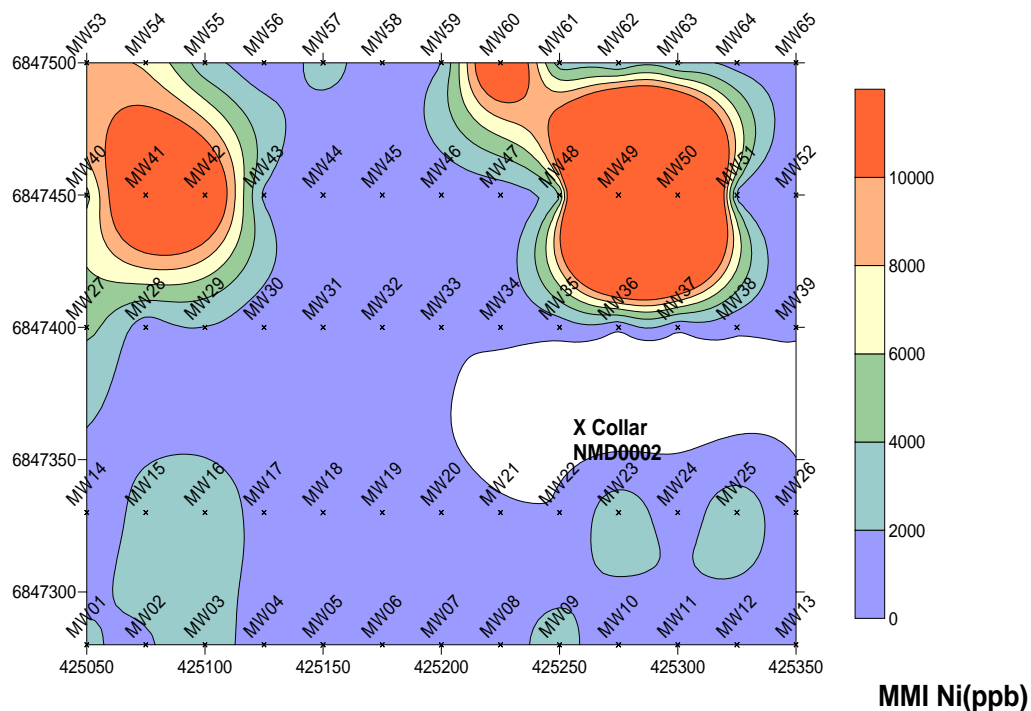
Drilling of a high priority surface TEM anomaly approximately 300 metres south of the most southern mine development at Mt Windarra (Poseidon target - NMD0002) was completed during the quarter. Although results were disappointing in locating nickeliferous sulphide mineralisation the Company has been highly encouraged by a Mobile Metal Ion (MMI) survey in the immediate area of the Poseidon surface TEM anomaly.

In early May 2006 sixty-five MMI samples were taken as an orientation program at the Poseidon target area (some 300 metres south of the Mt Windarra "B" shoot ore zone). The samples were taken on five lines fifty metres apart at 25 metre intervals.



Two extremely high order anomalies have been identified as a result of this program.

Based on this MMI program and the resultant strong anomalies it would appear that the initial diamond hole (NMD0002) may have “missed” the target by some 50 metres. This is due to the fact that the hole was drilled in a previously unrecognized major “break”, possibly structural, which has caused this geochemical pattern to be absent in the southern section of the survey area and the area targeted by NMD0002.



Mt Windarra - Niagara Mining
MMI Nickel

Key points of MMI survey:

- The MMI Ni contours show nickel to be high in the northern part of the surveyed area and north of the diamond drill hole NMD0002 which collar was between and slightly north of samples MW22 and 23
- Two anomalies are evident, one in the NW immediately adjacent to the BIF, and one to the north-east, which in part includes some sub-cropping ultramafic rocks. They may be related.
- High Ni in soils can result from either expression of high Ni in ultramafic rocks, or nickel sulphides. Two of the values are extremely high.
- The results are to the higher end of any seen with MMI.



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- A number of other elements such as chromium, cobalt, silver, palladium and gold were also assayed and they also highlighted the northern part of the survey area to be prospective for nickel sulphides.

In the light of this highly encouraging data the company is now preparing to undertake an infill MMI program to be conducted between the southern most part of the “B” shoot which had been previously mined by Western Mining and the most northern line of the MMI survey. As mentioned previously this is an area of some 300m in length.

Once this MMI program has been completed and results received and interpreted, together with all other available data e.g. moving loop TEM, data from the historical records and NMD0002 the company will look at repositioning a new targeted diamond hole.

South Windarra

Historic exploration and mining records indicate that low grade sulphides and oxide nickel resources exist in surface dumps at South Windarra. The Company is targeting 1.5 million to 2 million tonnes of mineralisation in these surface dumps to provide feedstock for a simple, effective and low cost nickel heap leach operation. The targeted grade is +1% Ni plus minor cobalt and copper values.

Heap leach laboratory testing has taken longer than expected and was still in progress at quarter's end to gain final design data for a simple hydrometallurgical plant to treat a low grade sulphide ore stockpiled at the South Windarra mine site to produce an intermediate nickel hydroxide/carbonate product.

A positive development decision is likely in the near term with projected returns very robust in the current nickel climate.

Regional Exploration WNP

During the quarter the Company began a systematic regional surface TEM survey programme to provide full coverage from Denny Bore through to Mt Windarra (see attached plan 2) after highly encouraging trial results in the March quarter led to the drilling and identification of what the Company believes to be a new high grade nickel sulphide system at Sub Zero. The survey is anticipated to cover over 60 line kilometres of the WNP area with field work due to be completed during the current quarter followed by the analysis and interpretation.

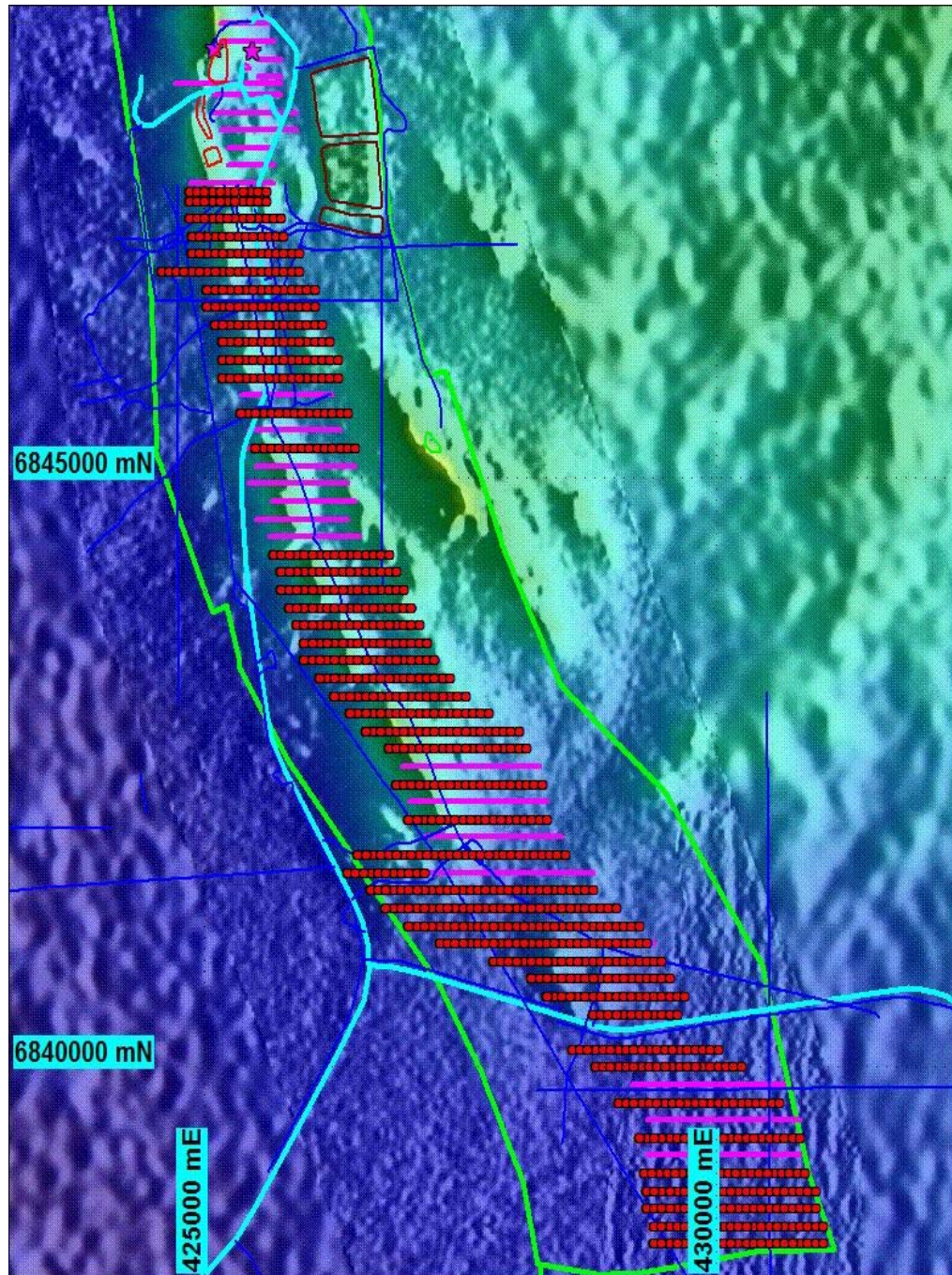


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Plan 2: Surface TEM survey lines north from Mt Windarra to Sub Zero in the south

Sub Zero

A follow-up SQUID Fixed Loop TEM (figure 8) survey was completed over the Sub Zero surface TEM target identified previously by a trial surface TEM survey to firm up its location for drill testing. NMD0003 was drilled to test the strong bedrock conductor approximately 370 metres below surface. The hole failed to locate nickel



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mineralisation and it was decided to clear a near-by historic WMC diamond drill hole (WED4) which had intersected a minor zone of high grade massive nickel sulphides.

The hole was surveyed to determine its absolute position utilising modern down hole surveying tools. The Company then undertook a detailed down hole geophysical survey (DHTEM) to determine whether any significant off-hole TEM targets existed. A moderate to strong off-hole conductor was located directly updip of the WED4 nickel sulphide intersection towards the stratigraphic position of the Sub Zero target.

As reported to the ASX previously on 16th June and 27th June the Company's diamond drilled wedge hole (WED4A) intersected a thicker zone of very high grade massive nickel sulphides (0.37m @ 17.58% Ni (794.80 – 795.17m) downhole).

DHTEM surveying of WED4A has revealed that the central section of the conductor has not been intersected. Also of important note is that the nickel mineralisation is interpreted (awaiting confirmation from petrographic examination) to be located within pyrite dominant sulphides which generally do not conduct strongly. This means that although the DHTEM determined only a moderately strong conductive source, the dominantly pyritic sulphides could be providing a relatively subdued signature of a high grade nickel sulphide zone.

It is the Company's belief that this further intersection of nickel sulphides in WED4A could be indicative of a new high grade nickel sulphide system at the WNP and is distinct from previous discoveries made at Mt Windarra and South Windarra.

Gold

Mt Windarra – Gold Tailings Project, Laverton W.A.

AM 70/260, G38/21 (100%)

The Mt Windarra mine site was the location for the central processing of nickel ores from both the Mt Windarra, South Windarra and to a lesser extent Perseverance nickel mines. What is not commonly known is that the site was also the location for the processing of over 5 million tonnes of gold ores from the WMC Lancefield and Beasley Creek gold mines operating in the immediate area.

During the WNP data transfer the Company located a study undertaken by WMC in 1997 on the re-treatment of the northern gold tailings storage facility which is one of two dedicated gold tailings storage facilities at the Mt Windarra mine area.

The study by WMC indicates that the northern gold tailings storage facility contains in excess of 100,000 ounces gold with an in ground value in excess of A\$80million at current gold prices.

With a strengthening gold price and firm outlook the gold tailings at the Mt Windarra site have provided the Company with a potentially valuable asset to be



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developed. Progression of the development of the gold tailings will occur concurrently with the redevelopment of the Mt Windarra nickel mine.

Salman South Gold Project (formally Dadwen Gold Project), Ghana West Africa PL No. 25639 (80%)

Soil sampling was completed during the quarter to assist in locating final drill site positions. Compensation to local farmers was progressed to allow drill pad preparations and necessary access clearing. Drilling was unable to start during the quarter as expected due to drilling rig compressor difficulties. A contract is currently being re-negotiated for a program to commence in October with a high air capacity rig capable of handling expected high water inflows.

The Company has completed its earn-in expenditure commitments for the Salman South Gold Project area during the quarter and is now entitled to 80% of the project. The Company continues to study strategic options to maximise shareholder value for the Salman South Gold Project.

Project Generation

The Company will continue to source further large resource opportunities to grow the Company's current asset portfolio. The Company is also reviewing and will implement potential corporate opportunities as they arise.

Corporate

The Company resolved to issue 4,000,000 options in the Company to a large overseas investor relations group to generate greater awareness of the Company's activities to overseas investors with pleasing results to date. The term of the options issue is as follows;

1. Two million A\$0.50 options exercisable 30th June 2008
2. Two million A\$1.00 options exercisable 30th June 2008

During the quarter 17,583,300 shares were issued as holders of partly paid shares contributed outstanding capital of \$879,165.

For and on behalf of
NIAGARA MINING LIMITED

Douglas C. Daws
EXECUTIVE CHAIRMAN



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DISCLAIMER

The information in this document that relates to exploration results and resources is based on information compiled by Mr Mick Elias who is a director and employee of CSA Australia Pty Ltd. Mr Elias is a Fellow of the Australasian Institute of Mining and Metallurgy. He has sufficient experience which is relevant to the style of mineralization 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 "Australian Code for Reporting Exploration Results, Mineral Resources and Ore Reserves". He has consented to the inclusion of this information in the form and context in which it appears. The Australian Stock Exchange has not received and does not accept responsibility for the accuracy or adequacy of this release.



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Rule 5.3

Appendix 5B

Mining exploration entity quarterly report

Introduced 1/7/96. Origin: Appendix 8. Amended 1/7/97, 1/7/98, 30/9/2001.

Name of entity

Niagara Mining Limited

ABN

60 060 525 206

Quarter ended ("current quarter")

30 June 2006

Consolidated statement of cash flows

	Current quarter \$A'000	Year to date (12 months) \$A'000
Cash flows related to operating activities		
1.1 Receipts from product sales and related debtors	-	-
1.2 Payments for		
(a) exploration and evaluation	(961)	(1,812)
(b) development	-	-
(c) production	-	-
(d) administration	(181)	(996)
1.3 Dividends received	-	-
1.4 Interest and other items of a similar nature received	49	122
1.5 Interest and other costs of finance paid	-	-
1.6 Income taxes paid	-	-
1.7 Other (provide details if material)	16	55
Net Operating Cash Flows	(1,077)	(2,631)
Cash flows related to investing activities		
1.8 Payment for purchases of:		
(a) prospects	(454)	(5,704)
(b) equity investments	-	-
(c) other fixed assets	(7)	(40)
1.9 Proceeds from sale of:		
(a) prospects	-	-
(b) equity investments	-	-
(c) other fixed assets	-	-
1.10 Loans to other entities	-	-
1.11 Loans repaid by other entities	-	-
1.12 Other (provide details if material)	-	-
Net investing cash flows	(461)	(5,744)
1.13 Total operating and investing cash flows (carried forward)	(1,538)	(8,375)



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1.13	Total operating and investing cash flows (brought forward)	(1,538)	(8,375)
Cash flows related to financing activities			
1.14	Proceeds from issues of shares, options, etc.	744	11,903
1.15	Proceeds from sale of forfeited shares	-	-
1.16	Proceeds from borrowings	-	-
1.17	Repayment of borrowings	-	-
1.18	Dividends paid	-	-
1.19	Other (provide details if material) – Share Issue Costs	-	(650)
Net financing cash flows		744	11,253
Net increase (decrease) in cash held		(794)	2,878
1.20	Cash at beginning of quarter/year to date	3,921	249
1.21	Exchange rate adjustments to item 1.20	-	-
1.22	Cash at end of quarter	3,127	3,127

Payments to directors of the entity and associates of the directors

Payments to related entities of the entity and associates of the related entities

		Current quarter \$A'000
1.23	Aggregate amount of payments to the parties included in item 1.2	67
1.24	Aggregate amount of loans to the parties included in item 1.10	-
1.25	Explanation necessary for an understanding of the transactions	
N/A		

Non-cash financing and investing activities

2.1	Details of financing and investing transactions which have had a material effect on consolidated assets and liabilities but did not involve cash flows	N/A
2.2	Details of outlays made by other entities to establish or increase their share in projects in which the reporting entity has an interest	N/A



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Financing facilities available

Add notes as necessary for an understanding of the position.

	Amount available \$A'000	Amount used \$A'000
3.1 Loan facilities	-	-
3.2 Credit standby arrangements	-	-

Estimated cash outflows for next quarter

	\$A'000
4.1 Exploration and evaluation	500
4.2 Development	-
Total	500

Reconciliation of cash

Reconciliation of cash at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts is as follows.

	Current quarter \$A'000	Previous quarter \$A'000
5.1 Cash on hand and at bank	566	89
5.2 Deposits at call	2,560	3,832
5.3 Bank overdraft	-	-
5.4 Other (provide details)	-	-
Total: cash at end of quarter (item 1.22)	3,127	3,921

Changes in interests in mining tenements

	Tenement reference	Nature of interest (note (2))	Interest at beginning of quarter	Interest at end of quarter
6.1	Interests in mining tenements relinquished, reduced or lapsed	N/A		
6.2	Interests in mining tenements acquired or increased	N/A		



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Issued and quoted securities at end of current quarter

Description includes rate of interest and any redemption or conversion rights together with prices and dates.

	Total number	Number quoted	Issue price per security (see note 3) (cents)	Amount paid up per security (see note 3) (cents)
7.1 Preference securities <i>(description)</i>				
7.2 Changes during quarter (a) Increases through issues (b) Decreases through returns of capital, buy-backs, redemptions				
7.3 +Ordinary securities	217,566,622	204,566,622		
	2,900,000	-	\$0.06	\$0.01
	22,666,700	-	\$0.051	\$0.001
7.4 Changes during quarter (a) Increases through issues (b) Decreases through returns of capital, buy-backs				
7.5 +Convertible debt securities <i>(description)</i>				
7.6 Changes during quarter (a) Increases through issues (b) Decreases through securities matured, converted				
7.7 Options <i>(description and conversion factor)</i>	2,000,000	-	<i>Exercise price</i> \$0.20	<i>Expiry date</i> 1 December 2006
	7,000,000	-	\$0.20	1 December 2015
7.8 Issued during quarter				
7.9 Exercised during quarter				
7.10 Expired during quarter				
7.11 Debentures <i>(totals only)</i>				
7.12 Unsecured notes <i>(totals only)</i>				



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Compliance statement

1 This statement has been prepared under accounting policies which comply with accounting standards as defined in the Corporations Act or other standards acceptable to ASX (see note 4).

2 This statement does give a true and fair view of the matters disclosed.

Sign here: Date: 31 July 2006
(Director/Company secretary)

Print name: Douglas Charles Daws

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 wanting to disclose additional information is encouraged to do so, in a note or notes attached to this report.

2 The "Nature of interest" (items 6.1 and 6.2) includes options in respect of interests in mining tenements acquired, exercised or lapsed during the reporting period. If the entity is involved in a joint venture agreement and there are conditions precedent which will change its percentage interest in a mining tenement, it should disclose the change of percentage interest and conditions precedent in the list required for items 6.1 and 6.2.

3 **Issued and quoted securities** The issue price and amount paid up is not required in items 7.1 and 7.3 for fully paid securities.

4 The definitions in, and provisions of, *AASB 1022: Accounting for Extractive Industries* and *AASB 1026: Statement of Cash Flows* apply to this report.

5 **Accounting Standards** ASX will accept, for example, the use of International Accounting Standards for foreign entities. If the standards used do not address a topic, the Australian standard on that topic (if any) must be complied with.

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