



NIAGARA
MINING LIMITED
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31 January 2007

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 FOR THE PERIOD ENDING 31 DECEMBER 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

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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.niagaramining.com.au



ASX Announcement

31 January 2007

Quarterly Report for the period ending 31 December 2006

HIGHLIGHTS

- Drilling continues to outline massive nickel sulphides at Mt Windarra – WNP
- Drilling commenced at Denny Bore – WNP
- Significant progress made in digitising geological data base – WNP
- High Grade Zinc Lead and Silver - WNP
- Minister approves transfer of title of the WNP to Niagara
- Gold mineralization intersected in drilling at Salman South – Ghana

REVIEW OF OPERATIONS

The Company once again has made excellent progress on its key project areas during the period ended 31st December 2006. Positive results have been returned from numerous drilling programs at the Windarra Nickel Project (WNP) north of Kalgoorlie (W.A.) and positive results have been received from exploration of the highly prospective Salman South Gold Project which is situated directly along strike to the south of Adamus Resources Limited's Salman Gold Project (+900koz) in Ghana West Africa.

Nickel

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

261SA, G38/21 (100%), includes ML 38/1243, ML 38/1244, ML 38/1245 (applications)

The Company advised its shareholders (ASX release 29th November 2006) that Minister for Resources and assisting the Minister for State Development had approved the transfer of title to Niagara of mining lease 261SA holding the WNP. Mining Lease 261SA was established under the Poseidon Nickel Agreement Act. The lease has been renewed for a further 21 years to 10th December 2027.

Mt Windarra

Substantial progress in the digitisation of the WNP geological data base records continued during the December quarter. The work being undertaken will allow the calculation of a JORC compliant geological resource for the Mt Windarra mine area which is being prepared by independent mining industry consultants.

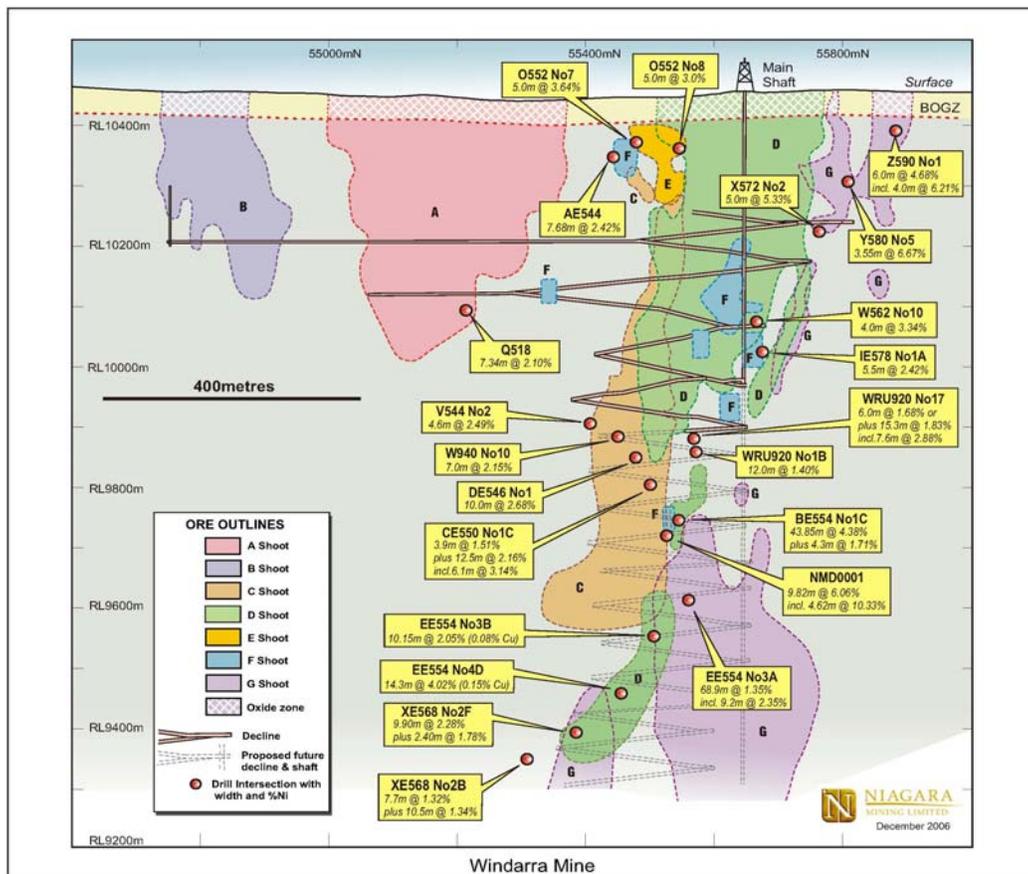
To date over 160,000 metres of diamond drill results (+820 drill holes) have been entered into the geological data base with approximately 450 holes remaining to be



entered from the mine area. Further drilling data will eventually be added from the historic regional exploration records. This includes numerous nickel sulphide occurrences along the +20km strike of the Windarra Komatiite now 100% owned by Niagara Mining and from ongoing drilling programs.

Figure 1 is a longitudinal projection of the Mt Windarra mine, its nickel ore shoots and several significant drill intersections the Company has uncovered as part of its review of the "hard data". The hard data was included as part of the purchase of the WNP and will be utilised in calculating a geological resource. The drilling results are from previous exploration work undertaken by Poseidon, Western Mining Corporation (WMC) and more recently by the Company (NMD0001). Also projected are proposed extensions to the decline and further shaft development which will access the nickel ores below the current development levels should they prove to be economic.

The identified drill intersections will be the focus of further drill targeting and exploration work in the belief it will aid in significantly increasing future nickel mineral resources and ultimately provide ore reserves which can then be exploited. The full extent of these intersections has not adequately been explored by modern methods and DTEM modelling on some holes indicates significant extension possibilities to these ore shoots down dip from the limited holes tested thus far. The chances of new nickeliferous sulphide discoveries within the immediate mine location can be considered highly likely due to limited drilling undertaken at depth and the nature of massive nickel sulphides as seen in other nickel sulphide mines in Western Australia.





The Company has signed a memorandum of understanding with “*Windarra Underground Pty Ltd*” to commence dewatering and mine re-entry as soon as all statutory approvals have been received. Equipment for the first phase of evaluation has been secured and is being prepared for relocation to the Mt Windarra mine site.

Drilling of DHTeM targets generated from NMD0001 and subsequent wedge drill holes continued during the quarter with successful results obtained for NMD0001E:

NMD0001E 2.95m at 2.99% Ni (646.15 - 649.10m) downhole (length and SG weighted average grade)
including 0.71m at 7.20% Ni (647.54 - 648.25m) downhole

The remobilised stringer/massive sulphides occur within a sheared and tectonised zone of ultramafic lithologies that is intruded by a number of intermediate to mafic dykes and quartz veins. Above the tectonised zone less deformed ultramafic rocks host disseminated mineralisation that returned assays of

NMD0001E 11m at 1.26% Ni (621 - 632m) downhole (length and SG weighted)

Downhole EM surveying completed in NMD0001E has identified a strong conductor located below the hole at the depth of the mineralisation. The conductor is interpreted to have a steep southerly plunge and appears to be related to the previously announced nickel intersections in NMD0001. Further drilling is planned to test this conductor along the interpreted line of plunge.

Diamond drilling of hole NMD0001F had been completed to a downhole depth of 1,020 metres and partially surveyed. It is now expected the hole will be deepened when access to a higher capacity rig is made available to allow NMD0001F to be used as a DHTeM platform. It is anticipated that this hole will be able to provide information on the continuity of the nickel sulphide mineralisation present at depth at Mt Windarra and to allow a high level of accuracy in targeting of the high grade massive nickel sulphide zones below the historic mine workings. The Company is currently working with its drilling contractor, Apex Drilling, to procure a rig capable for this work.

The Company and its specialist mining consultants are beginning to understand the geological setting of the high grade massive nickel sulphides and expect further positive results to continue to be returned from drilling the DHTeM targets generated from this continual work at Mt Windarra.

South Windarra

Optimisation of the South Windarra Nickel Heap Leach Project continued during the December quarter with a focus on producing a saleable product quickly with minimal capital expenditure. Subsequent to the December quarter’s end and as announced to the ASX on 30th January 2007 the flow sheet design for the heap leach project has been agreed upon.

Submission of the South Windarra Nickel heap Leach Project proposal to relevant government statutory bodies to begin the approvals process is imminent.

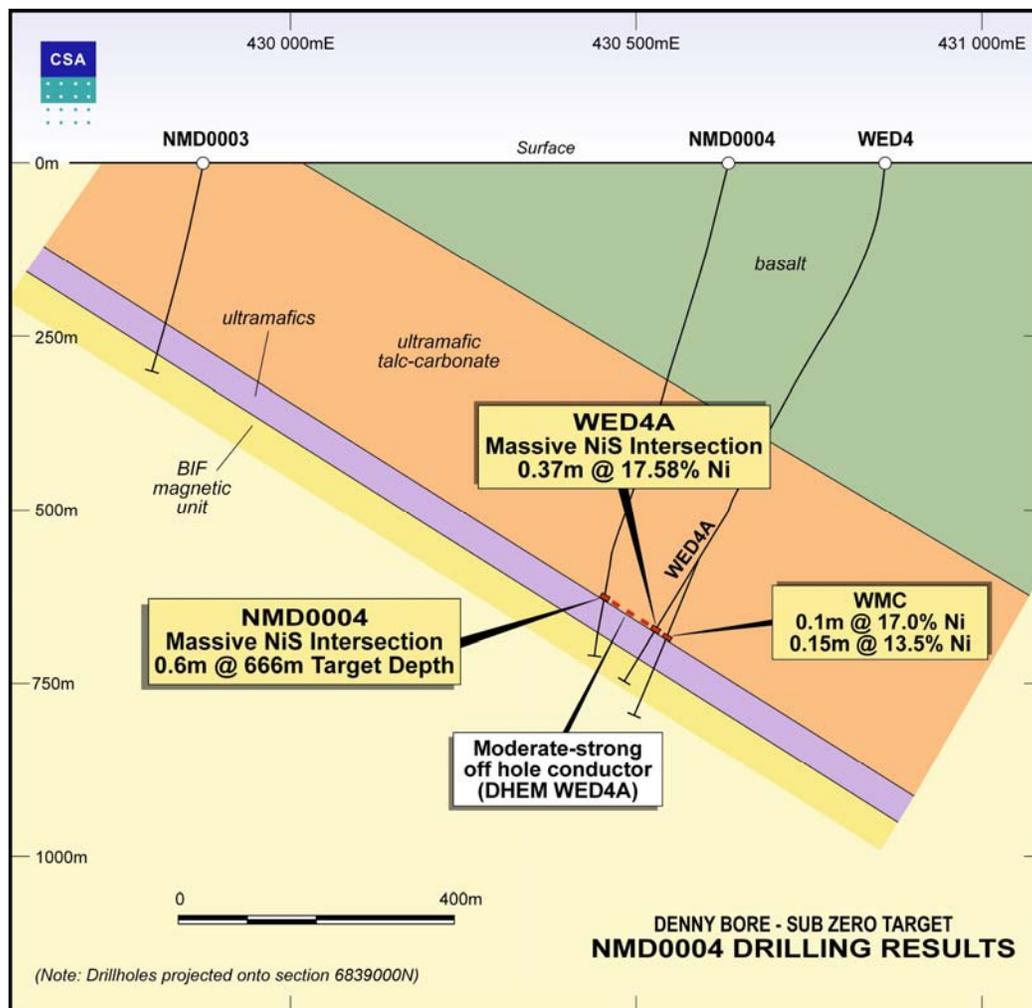
Results for the Don Juan surface TEM anomaly located to the south east of the South Windarra mine drilled in the previous quarter were received and returned



generally disappointing results. Targeting of nickel sulphides in the immediate area of the South Windarra mine area will be reviewed further.

Denny Bore (Sub-Zero)

Diamond drilling of hole NMD0004 situated at Denny Bore, approximately 10km south of Mt Windarra, started late in the December quarter. NMD0004 was targeting the DHEM target generated from WED4A which intersected a small zone of high grade massive nickel sulphides (+17%Ni). Subsequent to the quarter's end NMD0004 had intersected massive sulphides in the target zone and assays are pending (see ASX release 25th January 2007). The massive sulphide zone had thickened considerably relative to WED4A and drilling will continue in the Denny Bore area to target economic massive nickel sulphides.





Patron

A recent hole clearing exercise to enable the Company to undertake DHTM of a historic WMC diamond drill hole (WED13) located within the WNP area (approximately 4km south of Mt Windarra mine site) has inadvertently recovered extremely high grade zinc lead silver mineralisation (see attached photograph) when the drill rods skewed from the hole path at approximately 682m below surface.

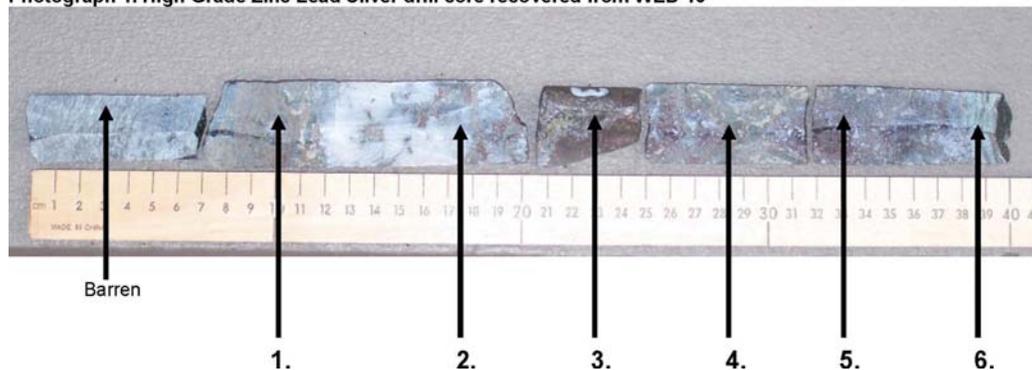
The mineralisation was tested with a hand held XRF analyser which is able to test for a range of elements and returned very high grade spot results from a number of 30 second XRF test readings (readings are shown in the table accompanying the photograph of the core). The unit used was a NITON XLt592V and it is used for a wide range of applications in the mining and exploration industry from exploration and testing of solid rocks, core and RC samples through to testing of ore grade materials. The Company employed an industrial bulk setting to assess the zinc and lead that is designed to measure high concentration samples and we used the standard soil mode to assess silver concentrations. Standard soil is designed to measure very low concentration samples in the order of 50ppm-1500ppm for Ag using a 30 second test time.

The technology used is for preliminary screening data only and the spot measurements taken were targeted on highly mineralised material in order to get an idea of what mineral species we had recovered from the drill hole.

The extremely high grade nature of the mineralisation though is very encouraging.

The location of the mineralisation coincides with a well defined fault structure seen on the aeromagnetics and may be the cause for surface TEM anomalies identified from the surface TEM work undertaken in early 2006.

Photograph 1. High Grade Zinc Lead Silver drill core recovered from WED 13



1. 20.97% Zn + 4.91% Pb + 124 g/t Ag	2. 15.06% Zn + 2.82% Pb + 55 g/t Ag
3. 35.59% Zn + 3.31% Pb + 236 g/t Ag	4. 26.80% ZN + 10.40% Pb + 211 g/t Ag
5. 36.38% Zn + 14.36% Pb + 538 g/t Ag	6. 17.29% Zn + 3.84% Pb + 72 g/t Ag



The Company expects to re-drill WED13 as soon as a suitable rig becomes available. WED13 was found to be blocked after sending down a dummy DHEM probe to test EM targets.

Gold

Mt Windarra Gold Tailings Project, Laverton W.A. 261SA, G38/21 (100%)

The Company has applied to utilise the northern gold tailings storage facility at Mt Windarra as a discharge site for the dewatering of the Mt Windarra mine. It is likely the tailings storage facility will be required for a minimum of six-months for this purpose. Further work towards the re-treatment of the northern gold tailings storage facility will occur once dewatering has been completed.

Salman South Gold Project, Ghana West Africa PI No. 25639 (80%)

A Boart Longyear MPD 1500 Drill Rig arrived on site on the 24th November and drilling got underway at the Company's highly prospective Salman South Gold Project. A total of 24 RC holes out of the proposed 27 RC holes, representing 85% have been completed since the commencement of the RC drilling.

RSG Global are supervising the drilling program on behalf of the Company. All holes drilled so far have been logged on site by an RSGG geologist. Each hole is being surveyed every 50m using a Reflex Downhole survey camera.

RC holes are sampled on a 1 metre interval with field duplicates taken every 20th sample. Quality control standards are inserted for every 25th sample. At the end of the December quarter over 800 RC samples, including quality control standards and duplicates, were dispatched to the SGS laboratory at Tarkwa for 50g charge fire assay.



Boart Longyear MPD 1500 RC Drill Rig at Salman South



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RC Drill samples at Salman South

Significant intercepts returned thus far from the drilling at Salman South include 1m @2.62 g/t Au from 1m and 2m @ 1.91 g/t Au from 20m in hole SSRC003.

Work was continuing at the December quarter's end to complete drill pads at Salman Far South and begin preparing access to the Mame central area to the south east of Salman South in preparation of further drilling.

Corporate

The Company placed 3,781,572 shares to Australian Institutional and sophisticated investors at an issue price of A\$0.38 each to raise A\$1,437,000 in additional working capital before costs. The placement shares have free attaching Dec 2009 A\$0.405 exercise and Dec 2011 A\$0.46 exercise options as outlined in the Company AGM notice to shareholders late 2006. 115,789 shares in the Company were issued as part settlement of broker fees to the placement.

2,000,000 A\$0.20 exercise options were exercised during the quarter adding A\$400,000 to the Company cash reserves.

1,234,000 shares were issued to holders of partly paid share who contributed A\$61,760 in outstanding capital.

The Company announced on the 1st November 2006 the appointment of Christopher J. Daws as a Director of the Company. The appointment was ratified by shareholders at the Company AGM on the 31st November 2006.



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Subsequent to the December quarters end the Company placed 35,000,000 shares at A\$0.22 with free attaching options (see ASX release 24 January 2007) to RAB Capital and sophisticated investors raising A\$7,700,000 in working capital.

The Company looks forward to progressing its exploration and development opportunities and thanks the support of its long term shareholders as we build towards an exciting year in 2007.

Douglas C. Daws
EXECUTIVE CHAIRMAN

Note: The information in this report that relates to exploration results is based on information compiled by Mr Mick Elias, consulting geologist, who is a Fellow of the Australian 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.