



NAUTILUS
Minerals Inc.

COMPANY INFORMATION

NAUTILUS MINERALS INC.

Corporate Office:
Suite 801
141 Adelaide Street
Toronto, Ontario
M5H3L5

NEWS RELEASE

Number 2008-03

Solwara 1 Metallurgical and Mineralogical Results

Toronto Ontario, February 22, 2008 - **Nautilus Minerals Inc. (TSX & AIM: NUS)** (the "Company" or "Nautilus") is pleased to announce preliminary results from its first phase mineralogical and metallurgical investigations of ore from a representative 1.2 tonne drill core sample recovered during the 2007 drilling campaign at the Company's Solwara 1 Project, located in the territorial waters of Papua New Guinea ("PNG").

David Heydon, Nautilus' CEO said: "The results of the mineralogical program conducted at G&T Metallurgical Services of Canada ("G&T") and the initial phase of metallurgical work carried out by AMMTEC of Australia, provide clear evidence that the Solwara 1 material is a "simple ore", that should produce a commercial grade copper concentrate with low impurity levels and good recovery."

The mineralogical work was carried out by G&T on composite samples recovered from Solwara 1 during the 2007 drilling campaign, as documented in the Resource Report completed by Golder and Associates, released on [February 1, 2008](#). The program was designed to provide data to optimise the flotation process design. The following key points have been concluded from this mineralogical work:

- Chalcopyrite is the dominant copper ore mineral;
- The gangue is pyrite, barite, anhydrite and minor silicate minerals, all of which are readily separated from chalcopyrite using standard flotation techniques;
- The majority of the massive sulphide tested is coarse grained. Grinding tests indicate effective liberation with a likely primary grind size of 80% - 50 micron;
- The principal impurity element arsenic is held almost exclusively in the mineral arsenopyrite. Grinding tests indicate that the arsenopyrite is readily liberated from the chalcopyrite and flotation will produce concentrates with acceptable arsenic contents; and
- The copper concentrates will likely contain significant gold contents and in some cases payable levels of silver. Further work into gold and silver department is underway.

Table 1 – Mineralogical Composition of Solwara 1 Ores

Minerals	Units	Deposit Composites	
		Sample 2*	Sample 3*
Chalcopyrite	%	20.9	29.2
Bornite	%	0.1	0.3
Chalcocite/Covellite	%	0.1	0.1
Tennantite/Tetrahedrite	%	0.13	0.17
Galena	%	0.1	0.1
Sphalerite	%	0.9	0.5
Arsenopyrite	%	0.44	0.22
Pyrite	%	56.2	56.7
Gangue	%	21.0	12.7
Total	100	100	100

*Sample described in Resource Report released on [February 1, 2008](#)

Metallurgical test work on the ore samples recovered from Solwara 1 continues at AMMTEC laboratories. Initial results from grindability tests indicate that the ore is soft with expected Bond Work Indices values in the range of 10 to 12 kWh/t. Initial flotation test work which to date only extends to a single cleaner stage testing indicates that a commercial grade concentrate (ca. 25% or greater copper) at high recovery can be produced from all major ore types. Further test work to extend the current single stage cleaning to three stage production of a separate pyrite concentrate for gold department and optimisation of reagent use is underway. This work is expected to be completed by the end of April 2008.

The metallurgical and mineralogical results reported in this announcement have been compiled under the supervision of Mr Peter Munro, a full time employee of Mineralogy Pty Ltd and Dr N.W. (Bill) Johnson, a consultant for Mineralogy Pty Ltd. Both are corporate members of the Australasian Institute of Mining and Metallurgy, with over 20 years experience in mining and metallurgical process engineering and are deemed to be qualified persons. Both members have consented to their names being used in this release.

About Nautilus Minerals Inc.

Nautilus is the first company to commercially explore the ocean floor for gold and copper seafloor massive sulphide deposits and subject to timely permitting is positioning itself to become an emerging producer in 2010. The Company's main focus for 2008 is the Solwara 1 Project, which is located in the territorial waters of Papua New Guinea in the western Pacific Ocean. Nautilus is listed on the TSX and on AIM, and has among its largest shareholders three of the world's leading international resource companies, including Epion (22.4%), Teck Cominco (7.2%) and Anglo American (5.7%).

For more information please refer www.nautilusminerals.com or contact:

Investor Relations
Nautilus Minerals Inc. (Toronto)
Email: investor@nautilusminerals.com
Tel: +1 (416) 551 1100

Australian Project Office
Tel: +61 (7) 3318 5555

Numis Securities Limited (NOMAD)
John Harrison/James Black
Tel: + 44(0) 20 7260 1000

Conduit PR Ltd (UK Financial PR)
Charlie Geller/Arabella Hobbs
Tel: + 44(0) 20 7429 6610 // +44(0) 7979 067 320

Neither the TSX nor the London Stock Exchange accept responsibility for the adequacy or accuracy of this press release.