NEWS RELEASE

Nautilus Minerals Releases Offshore Production System Definition and Cost Study

Toronto Ontario, June 23, 2010 - Nautilus Minerals Inc. (TSX & AIM: NUS) (the “Company” or “Nautilus”) announces the results of an independent definition and cost study (the “Study”) for its proposed offshore production system (the “Offshore Production System”) to be deployed in the territorial waters of Papua New Guinea (“PNG”).

The Study provides definition and cost estimates to extract material from the seafloor mineral resources at the Company’s Solwara 1 site (the “Project”), to raise it to the support vessel, dewater it and deliver it to the Port of Rabaul, PNG.

The key conclusions of the Study are as follows:

- Capital costs for the Offshore Production System, including those associated with barging to the Port of Rabaul, are estimated to be US$383 million (including a 17.5% contingency).
- Average operating costs up to the Port of Rabaul are estimated to be US$70 per tonne (including a 10% contingency) based on a 1.35 million tonnes per year production rate.
- The Study indicates production commencing at a rate of 1.2 million tonnes per year (dry equivalent) but notes that the Offshore Production System will have the capacity to ramp up to 1.8 million tonnes per year.
- The Study estimates it will take 30 months to complete the build of the Offshore Production System and to commence commercial production once approved by the Board of Nautilus.

As of the date hereof, the complete build of the Offshore Production System has not been approved by the Board of Nautilus. Subject to securing adequate financing to advance the Project through to commercial production, Board approval is expected to be received during 2010. Nautilus does not intend to complete a formal feasibility study or define a large, long life resource or reserve before it proceeds with the completion of the equipment build and commencement of production at the Solwara 1 Project. Management considers the Company’s best interests are served by first demonstrating that existing offshore technologies can be adapted to cut and recover high grade seafloor massive sulphides from the deep ocean.

Stephen Rogers, Nautilus’ CEO commented: “The Study was completed to provide cost guidance and project definition. The work contains the results of over five years of engineering, testing and mine planning. Our estimated operating costs are competitive with the operating costs for existing deep underground mines. However, one of our great advantages over land-based mining is that the equipment
used in our Offshore Production System is mobile, allowing production at successive sites without needing significant additional capital investment.”

The Study

The Study was undertaken to obtain an independently confirmed summary of the components and an associated estimate of the offshore production costs only. Detailed information concerning the cost estimates and the basis for the estimates can be found in the Study.

The estimated operating costs set out in the Study do not include the cost of stockpiling material in Rabaul, reclaim from the stockpile, shipment to a treatment facility or any other downstream processing, transportation and sales costs including, but not limited to concentration, treatment and refining charges, cost of sales and any statutory royalties or production taxes. These costs are significant. The estimated operating costs also exclude the capital and financing costs associated with establishing the Offshore Production System.

In preparing the operating cost estimate, a heavy fuel oil price of US$523 per tonne and a production support vessel charter rate of US$75,000 per day (being a portion of the estimated daily costs of US$144,796 for the production support vessel) were assumed based on recent competitive market quotes. These two key assumptions account for approximately 40% of the estimated operating costs. Fuel costs will be subject to fluctuations in the market price of oil. The Study assumes that the production support vessel for the Project will be chartered. As Nautilus has not yet entered into a charter for the vessel, the price used in the estimate may not be realized.

Investors are cautioned that the Study is not an economic assessment of the Solwara 1 Project as a whole and does not confirm the Project’s economic viability. Investors are cautioned not to use the Study for that purpose and that a study of all costs, rates of recovery and reasonable revenue projections is necessary before any assessment of economic viability can be made.

The Study was developed from a preliminary mine plan that includes inferred mineral resources. Investors are cautioned that inferred resources are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the costs relating to the Offshore Production System set forth in the Study will be realized. In addition, the indicated mineral resources included in the mine plan are not mineral reserves and do not have demonstrated economic viability.

The Study addresses the entire proposed Offshore Production System, including barging to a land-based stockpile at Rabaul in Papua New Guinea. The principal operations involve:

- Seafloor cutting and gathering;
- Mineralized material (slurry) recovery to surface;
- Slurry dewatering;
- Mineralized material discharge to transportation barges; and
- Transport of the mineralized material to the Port of Rabaul.

The proposed Offshore Production System is composed of various technologies utilised in the oil and gas, mining and dredging industries but modified for the Offshore Production System.

Seafloor cutting is proposed to be undertaken by two large robotic machines that would excavate material from the seafloor by a continuous cutting process, not unlike coal or other bulk continuous mining machines on land. The Auxiliary Miner is a preparatory machine that deals with rough terrain and creates benches for the other machines to work. It will operate on tracks with spud assistance and has a boom mounted cutting head for flexibility. The second machine, the Bulk Miner, has higher cutting capacity but will be limited to working benches created by the Auxiliary Miner. Both machines would leave cut material on the seafloor for collection by the Gathering Machine. The Gathering Machine, also a large robotic vehicle, will collect the cut material by drawing it in as a seawater slurry through internal pumps. The slurry will exit the Gathering Machine through a flexible pipe and would then be transferred to the Riser and Lift System (RALS).

The proposed RALS system comprises a large pump and rigid riser pipe hanging from a vessel which
delivers the slurry to the surface. The proposed pump is a positive displacement type, designed and built by GE Hydril (Houston, TX). The pump would hang from a solid vertical riser pipe suspended beneath the support vessel. The pipe would be deployed to the seafloor by a large derrick and draw works system on board the vessel.

On deck of the production support vessel (PSV), the slurry would pass through a dewatering plant. The dewatered material would be discharged to a transportation barge moored alongside. Used seawater would be pumped back to the seafloor through the riser pipes and would provide the hydraulic power to operate the RALS pump. Discharge of the return water at the seafloor would avoid impacts to the warm surface seawaters, minimizing environmental impact of the operation.

The transportation barges will haul the material a short voyage of approximately 50 kms from the Solwara 1 site to a stockpile location in the Port of Rabaul. Definition and costs for barge unloading and all subsequent activities are not included in the scope of the Study.

See Figure 1: Process Flowsheet:
www.nautilusminerals.com/i/misc/Figure-1_Process_Flow_Diagram.pdf

The Study, which is titled “Offshore Production System Definition and Cost Study” and dated June 21, 2010, was prepared by Phil Jankowski, Erich Heymann and John Blackburn of SRK (Australia) Pty Ltd. in Perth and includes information prepared by Peter Chwastiak of Clough Limited, Peter Munro of Mineralurgy Pty Ltd, Andrew See of Ausenco Services Pty. Ltd and Ian Lipton of Golder Associates Pty. Ltd (collectively, the “Qualified Persons”).

The Qualified Persons have reviewed and approved the technical disclosure contained within this news release and are Qualified Persons and independent of the Company in accordance with National Instrument 43-101 – Standards of Disclosure for Mineral Projects as of the date hereof and at the time of the preparation of the Study.

The full text of the Study can be downloaded from Nautilus’ website at:
www.nautilusminerals.com/s/Investors-Financials.asp

**Issue of Variation Order**

The Offshore Production System described in the Study requires the build of three subsea deepwater machines for cutting and gathering, being the Auxiliary Miner, Bulk Miner and Gathering Machine.

Nautilus has today finalised and issued a variation order to Soil Machine Dynamics Ltd (“SMD”) to modify the existing design-build contract for the provision of two integrated machines and one handling system to three specialist machines and the associated launch and recovery systems. The SMD design-build contract was disclosed in a press release dated December 18, 2007 and can be found at Nautilus’ website at (www.nautilusminerals.com/s/Media-NewsReleases.asp?ReportID=277920).

The variation order valued at approximately £19 million (US$28 million or C$29 million equivalent)\(^1\) has been incorporated in the Study. It should be noted that no approval has been granted by the Nautilus Board for the recommencement of build of any other equipment for the Offshore Production System.

\(^1\) Exchange rates used: C$1.00 equal to US$0.97 and £0.66.

**About Nautilus Minerals Inc.**

Nautilus is the first company to commercially explore the ocean floor for polymetallic seafloor massive sulphide deposits and is currently developing its first project. The Company's main focus 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 AIM stock exchanges, and has among its largest shareholders two of the world's leading international resource companies Anglo American (11.1%), Teck Resources (6.8%) and Metallinvest, one of the largest and fastest growing mining and metallurgical holding companies in Russia, beneficially owns 21.0% of its shares through Gazmetall Holding (Cyprus) Limited.
Forward-Looking Information

This news release contains "forward-looking information" within the meaning of applicable securities laws. Forward-looking information is not comprised of historical facts and includes, but is not limited to, information concerning the operating costs, capital costs, production rates, the project build schedule and other factors associated with the Study. Generally, forward-looking information can be identified by the use of forward-looking terminology such as "plans", "expects", "anticipates", "believes", "may", "could", "would", "might" or "will" or variations of such words and phrases or statements (including in the negative). Forward-looking information reflects the Company’s current expectations regarding future results or events and is based on opinions, estimates and assumptions at the date indicated in the information, including the cost of fuel and the charter rate for the Company’s vessels, the proposed mine plan, receipt of regulatory approval in the anticipated time frames and assumptions regarding exchange rates. Such forward-looking information is subject to a variety of risks and uncertainties and other factors that could cause actual events or results to differ materially from those projected in the forward-looking information. Many of these assumptions are based on factors and events that are not within the control of the Company and there can be no assurance they will prove to be correct. Factors that could cause actual results to vary materially from results anticipated by such forward-looking information include changes in market conditions, variations in grade of material or recovery rates, regulatory approvals and other approvals, fluctuating metal prices and currency exchange rates, changes in project parameters, the possibility of project cost overruns or unanticipated costs and expenses, labour disputes and other risks of the mining industry, as well as those risk factors discussed in the Company’s Annual Information Form for the fiscal year ended December 31, 2009 (a copy of which is available on the Company’s profile at www.sedar.com). Although the Company has attempted to identify important factors that could cause actual actions, events or results to differ materially from those described in forward-looking information, there may be other factors that cause actions, events or results not to be anticipated, estimated or intended. There can be no assurance that forward-looking information will prove to be accurate, as actual results and future events could differ materially from those anticipated in such information. The Company does not undertake any obligation to update forward-looking information if circumstances or its management’s estimates or opinions should change except as required by applicable securities laws. The reader is cautioned not to place undue reliance on forward-looking information.

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