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NEWS RELEASE

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Exploration Success Continues for Nautilus Minerals

Toronto Ontario, May 27, 2009 - **Nautilus Minerals Inc. (TSX & AIM: NUS)** (the "Company" or "Nautilus") announces that it has successfully completed the first phase of its 2009 target generation program in Tonga on 100% owned Nautilus prospecting licences (Figure 1). Hand-held XRF analysis indicates the high-grade of the Seafloor Massive Sulphide ("SMS") systems sampled, with results up to 9.1% Cu and 34.9% Zn.

Nautilus is rapidly advancing its ability to acquire and interpret water column data, in collaboration with ocean chemistry expert Gary Massoth and other marine scientific researchers. Preliminary interpretation of water column survey data, gathered in Tongan waters last month has identified twelve anomalies in total. All water column anomalies[1] identified have signatures considered analogous with hydrothermal vent systems. Follow up video-tow and small dredge sampling were attempted over three of the anomalies. Sulphide mineralisation was recovered from two sites (named Tahi Moana 7 and FRSC02). The collaborative research program with Australian National University ("ANU"), from RV *Southern Surveyor* included multibeam swath mapping and water column surveys over key target areas identified by the exploration team. Eight of the water column anomalies are completely new discoveries. Three of the anomalies were identified following interpretation of previous NOAA ("National Oceanic and Atmospheric Administration, of the United States of America") voyage data, and FRSC02 is coincident with an area reported by KORDI ("Korea Ocean Research and Development Institute, of the Republic of Korea"). Laboratory assay results are pending and further work is required at each of the twelve sites.

Stephen Rogers, Nautilus' CEO, commented: "The delineation of a further twelve anomalies highlights the prospectivity of our large land package in Tonga. The recovery of sulphide mineralisation from two of the three sampling attempts confirms our high exploration hit ratio. We look forward to receiving the assay results from the two sampled systems, and the results of the second phase of the program, due to start this week."

Tahi Moana 7 is located on the NE Lau Spreading Centre, in water depths between 1880 to 1940 m and is approximately 14 km NNE of Nautilus' 2008 exploration partner Teck Resources' ("Teck") 2008 Maka SMS discovery (http://www.nautilusminerals.com/s/Media-NewsReleases.asp?ReportID=319379). A video camera tow following up the water column anomaly identified on the NEL5a survey line (Figure 2), defined an approximately 150 m long traverse containing features interpreted as sulphide outcrops, and other indicators associated with hydrothermal activity. A subsequent 170 m small dredge sampling line, focused on the area of the interpreted sulphide outcrops, recovered approximately 150 kg of sample containing a mixture of massive and semi-massive sulphide (25.5 kg) and volcanic rock (the remainder). The sulphide samples were subsequently tested using a Nitron XL3t-500 handheld XRF unit (see Table 1 for results).

Site FRSC02 is located in the Fonualei Rifts area, in water depths between 1640 to 1820 m, and 140 km south-southwest of Teck's 2008 Maka SMS discovery (Figure 2), the nearest known SMS system (http://www.nautilusminerals.com/s/Media-NewsReleases.asp?ReportID=319379). A 600 g sample of massive sulphide was recovered from the camera frame, following one of two video camera tows

implemented over a water column anomaly identified on survey line NEL11a. Two subsequent short small dredge sampling lines did not return further sulphide samples.

Nautilus' 2009 Tongan exploration program is being undertaken in collaboration with ANU and the Commonwealth Scientific and Industrial Research Organisation ("CSIRO"), onboard the Marine National Facility research vessel *Southern Surveyor* (Figure 3). Work is being completed under the supervision of ANU's Professor Richard Arculus, with input from CSIRO, ANU and Nautilus. The voyage mobilised from Lautoka, Fiji on April, 23 2009. The first phase of the program focused on Nautilus' granted Tongan tenements in the NE Lau Basin and was completed in Nuku' alofa, on May 18, 2009. Phase 2 will be undertaken from May 29 to June 25, 2009 and will focus on Nautilus' granted Tongan tenements in the Southern and Central Lau basin (Figure 1).

Links

Figure 1: www.nautilusminerals.com/i/misc/Figure1_TongaSS.pdf
Figure 2: www.nautilusminerals.com/i/misc/Figure2_TongaSS.pdf
Figure 3: www.nautilusminerals.com/i/photos/southern_surveyor_5.jpg[#]
Table 1: www.nautilusminerals.com/i/misc/Table1_TongaSS.pdf

[#]Photo courtesy of CSIRO

[1]Water Column Anomalies

A water column anomaly is defined herein as an "elevated response" of certain properties such as Nephelometric Turbidity Units ("NTU"), Eh and pH, which are commonly associated with hydrothermal systems. One of the main sensors used during this program is a Nephelometer, which measures the presence of suspended particulates in the water column, using a reflecting light source (see Figure 2 insets). Particle density is a function of the light reflected into the detector from the particles in the water, and is generally measured in NTU.

Water column anomalies, such as those defined during phase 1 of the program, are commonly associated with active hydrothermal systems and SMS systems (www.nautilusminerals.com/i/pdf/PDACMarch2009.pdf). The results can be affected by ocean currents and other physical factors.

Dredge Sampling

Dredge sampling involves deploying a small (<1 m diameter), metal framed, steel net and 1 tonne depressor weight from the vessel using a cable to drag the dredge across the target zone. The metal frame "skips" slowly along the seabed, intermittently collecting fist sized samples as it goes.

Note on Results of Indicative Analyses from Hand-held XRF, Niton XL3t-500 Instrument[**]

A hand-held XRF instrument (NitonXL3t-500) operated by NREA Australia Pty Ltd was used to obtain indications of the grade of materials recovered from the seafloor. The instrument used for this application does not provide the accuracy required to report assays. These analyses are the mean of 10 point measurements on unprepared surfaces of each of the samples reported. The instrument is not calibrated using certified standards and the samples have not been crushed and prepared to minimise matrix effects which may affect the accuracy of the analysis. However, previous comparison of XRF results with laboratory assay data indicate the XRF tool is a reliable method for providing indicative results of the tenor of mineralisation.

Measurements by hand-held XRF are not assay results and do not measure gold or silver. Samples will be formally assayed by the ALS Group in Brisbane, and results reported when available.

Qualified Person

The exploration results reported in this announcement have been compiled under the supervision of Michael Johnston, Vice President Strategic Development of Nautilus Minerals. Mr. Johnston is a member of the Australasian Institute of Mining and Metallurgy, has over 25 years experience in mining and exploration geology, and is a qualified person as defined by National Instrument 43-101. He consents to his name 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 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, Teck Resources (6.8%) and Anglo American (11.1%). Metalloinvest, 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.

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

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