STARFIELD RESOURCES INC. NEWS

Starfield Resources Provides Update On Hydrometallurgical Test Work

Ferguson Lake massive sulphide test run successful

Toronto, Ontario – January 19, 2011 – Starfield Resources Inc. (TSX: SRU) ("Starfield", "the Company") today provided an intermediate update on Phase II of test work on the Company's hydrometallurgical technology.

The technology aims to recover base metals and high grade iron oxide from massive sulphides at the Company's Ferguson Lake project in Nunavut in an environmentally friendly, cost effective and energy efficient manner.

Testing is currently being performed by SGS Canada Inc. in Lakefield, Ontario. Phase I testing, completed in the summer of 2010, successfully demonstrated continuous operation of the oxidation and hydrolysis sections of the hydrometallurgical process using a synthetic feed (primary leach solution). Phase II testing began in the fall of 2010, with an objective of proving the oxidation and hydrolysis sections using actual feed from Ferguson Lake massive sulphides.

"We're extremely pleased with the preliminary oxidation results," said André Douchane, President and CEO of Starfield. "The actual massive sulphide feed from Ferguson Lake produced very similar outcomes to the prior test work which used synthetic solution."

An extended oxidation run using actual feed was conducted during early January 2011. Preliminary results showed that the target single-pass oxidation level of 80% was achieved at about 18 hours run time and was exceeded after that. Oxidation is the first step after the massive sulphides are dissolved in the primary leach. The primary leach is used to dissolve the iron sulphide in the Ferguson Lake material, leaving the base metals in the solids to be dissolved in the secondary leach to be separated later. The purpose of oxidation and hydrolysis is to convert the dissolved iron to solid iron oxide and to regenerate the acid used in the primary leach.

The next most important part of the process is hydrolysis, where the leach solution is treated to recover hydrochloric acid. Test work on the hydrolysis portion of the process was successfully completed in Phase I using synthetic feed. Acid recovered contained from 20% to 26% hydrochloric acid, the strength at which it is used in the primary leach.. During Phase II testing, the oxidation and hydrolysis sections will be re-run together using actual solution from primary leach testing.

Phase II testing also saw SGS complete a series of flotation tests. These tests showed it is possible to easily reject 75% to 80% of gangue (waste rock), while recovering 99% of base metals and 97% of precious metals. Leaving more gangue at the mine site reduces the amount of non-sulphide material transported to the process plant, which in turn reduces costs by requiring less pumping power, smaller pipe lines and smaller tankage at the process plant. All of this results in higher metal value per ton processed.

The flotation test work produced approximately 200 kilograms of bulk concentrate, some of which will be used for primary leach testing in the Phase II work, to produce the feed needed for testing the oxidation and hydrolysis sections. The next step in this phase of testing will use the primary leach solution in a continuous loop from oxidation to hydrolysis to verify that actual feed works as well as synthetic feed. Some of the resulting oxidized solution and some of the filtrate from hydrolysis will be used to test the performance of the secondary leach in which the base metals are dissolved.

Completion of this last step takes the Company to the final phase – the design and operation of a mini-plant. Such a prototype is built and operated on a continuous basis, using Ferguson Lake massive sulphides, to perfect the full process and design of Starfield's hydrometallurgical process technology.

The technical information in this news release has been reviewed by Ray Irwin, BSc, P.Geo, a Qualified Person in accordance with National Instrument 43-101.

About Starfield
Starfield Resources Inc. is an advanced exploration and development stage company. The Company's primary asset is its Ferguson Lake nickel-copper-cobalt-platinum-palladium property in Nunavut, Canada. Additional assets include a nickel-copper-cobalt-PGE-chrome project in the Stillwater district of Montana with historic copper, nickel and chromite resources (non 43-101 and not to be relied on); the Moonlight copper project in California with significant NI 43-101 copper resources; and two gold properties currently leased/joint ventured in Nevada.

Starfield has also funded the development of a novel, environmentally friendly and energy efficient hydrometallurgical flow sheet to recover metals from massive sulphides.

About SGS
The SGS Group is the global leader and innovator in inspection, verification, testing and certification services. Founded in 1878, SGS is recognized as the global benchmark in quality and integrity. With more than 59,000 employees, SGS operates a network of over 1,000 offices and laboratories around the world.

Forward-Looking Statements

This news release may contain certain information that constitutes forward-looking statements. Forward-looking statements are frequently characterized by words such as "plan," "expect," "project," "intend," "believe," "anticipate" and other similar words, or statements that certain events or conditions "may" or "will" occur. Forward-looking statements are based on the opinions and estimates of management at the date the statements are made, and are 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 statements. These factors include the inherent risks involved in the exploration and development of mineral properties, the uncertainties involved in interpreting drilling results and other geological data, fluctuating metal prices and other factors described above and in the Company's most recent annual information form under the heading "Risk Factors" which has been filed electronically by means of the Canadian Securities Administrators' website located at www.sedar.com. The Company disclaims any obligation to update or revise any forward-looking statements if circumstances or management's estimates or opinions should change. The reader is cautioned not to place undue reliance on forward-looking statements.

For further information contact:

André J. Douchane
President and CEO
416-860-0400 ext. 222
adouchane@starfieldres.com

Greg Van Staveren
Chief Financial Officer
416-860-0400 ext. 223
gvanstaveren@starfieldres.com

Investor Relations
416-860-0400
info@starfieldres.com

www.starfieldres.com