



STARFIELD RESOURCES INC.

NEWS

Starfield Resources Details 2010 Exploration Program At Ferguson Lake

Drilling and ground reconnaissance planned for Y Lake Area

Toronto, Ontario – August 23, 2010 – Starfield Resources Inc. (TSX: SRU) (“Starfield”, “the Company”) today announced details of its 2010 exploration program in the highly prospective Y Lake area of the Company’s Ferguson Lake project in Nunavut.

The Y Lake area is located 20 to 25 kilometres south of the Ferguson Lake deposit, and is underlain by a mixed package of Archean rock, including banded iron formations, comprising the northeast continuation of the Yathkyed greenstone belt. A project wide VTEM survey conducted in 2005 and a detailed follow-up DIGHEM EM survey of the Y Lake area flown in 2009 have defined a series of potentially significant, locally branching conductive zones more than 25 kilometres in length that are centered on the south end of Y Lake. Based on ground reconnaissance and limited widely spaced drilling, these conductors are directly related to sulphide mineralization. Widely spaced rock chip sampling along this trend has defined areas containing strongly anomalous copper, zinc, cobalt, gold, and silver.

“The 2010 exploration drilling program and associated pre-drilling reconnaissance will be used to prioritize targets and plan future exploration programs in the Y Lake area,” said André Douchane, President and CEO.

The program, consisting of five planned holes totaling approximately 1,800 metres, is planned to test two separate conductivity anomalies characterized by strong metal values. They include copper (3,327 ppm and 10,000 ppm respectively), silver (2,948 ppb and 4,193 ppb respectively) and zinc (up to 2,613 ppm). Additionally, the exploration is planned to further test a zone of conductivity centered on Y Lake that is characterized by strong values of gold (up to 1,991 ppb) and copper (up to 1,806 ppm) in rock chip samples, as well as a 2008 drill intersection from hole FL08-418 (11.0 metres to 14.0 metres: 3.0 metres of 0.58 g/t gold). It should be noted that the first 11.0 metres of FL08-418 were not recovered during drilling.

“Our exploration program is currently under way, and drilling crews should be mobilized within the next couple of weeks,” said Mr. Douchane. “We look forward to the program’s results in the fall.”

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, 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.

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.

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