



STARFIELD RESOURCES INC.

NEWS

Starfield Resources Announces 2010 Exploration Plans For Stillwater Project

PGM targets and VEZ zone to be main focus

Toronto, Ontario – February 25, 2010 – Starfield Resources Inc. (“Starfield” or the “Company”) (TSX: SRU) today announced plans for a six-hole diamond drilling program in the summer of 2010 at the Company’s Stillwater Project in south central Montana.

The Stillwater project, located 129 kilometres west-southwest of Billings, consists of 50 patented and 763 unpatented lode claims totaling approximately 15,670 acres. Starfield’s land position covers a significant part of the Stillwater Complex along 38 kilometres of strike length and is immediately adjacent to Stillwater Mining Company’s (SMC) platinum-palladium producing JM Reef.

The Stillwater Complex is a large differentiated, mafic-ultramafic layered intrusion that is analogous in terms of the intrusive stratigraphic sequence and magmatic metalliferous horizons to the Bushveld Complex in South Africa. The JM Reef reportedly has proven and probable reserves of 42.4 million tons at a grade of 18.8 g/t platinum + palladium (Pt+Pd). Based on the geologic setting and previous exploration results, Starfield believes its large land position covers several high potential platinum group metal (PGM), copper-nickel-cobalt (Cu-Ni-Co) and chrome (Cr) exploration targets.

During the 2010 summer field program, Starfield plans to focus on two PGM targets. The Company has budgeted up to \$750,000 for the program, which includes drilling approximately 1,000 metres of core in six angled holes, plus geologic mapping and geochemical sampling. The PGM targets, at elevations ranging from 2,590 metres to 2,896 metres, include:

- The Volatile Enriched Zone (VEZ) located at the top of the Ultramafic Series
- A potentially high grade, discordant dunite body cross cutting the Ultramafic Series

The VEZ horizon is considered by Starfield geologists to be largely magmatic in origin, and as such is thought to have considerable size potential. It is a graphite/sulfide-bearing horizon that is subparallel to and is located 150 to 400 metres down section (south) of the JM Reef currently being mined by SMC. Although the VEZ is often masked by thin but extensive glacial till cover, a helicopter-borne electromagnetic and aeromagnetic survey flown in 2000 indicated the VEZ exhibits a nearly continuous conductivity anomaly. This conductivity anomaly is believed to represent sulphide mineralization approximately 12 kilometres in length west of the Stillwater River. The drilling program is designed to follow-up on

previous surface samples that averaged 18.3 g/t Pt+Pd with an average Pd:Pt ratio of 2.5:1. The Company plans to drill five angled diamond drill holes in the VEZ.

The second PGM drill target in the 2010 exploration program is a PGM-bearing discordant dunite body, approximately 250 metres in diameter located in the Crescent Creek area. This intrusive body may be analogous to strongly mineralized, discordant dunite bodies present in the Bushveld Complex. Previous rock chip grab samples from the Crescent Creek dunite area reportedly returned combined Pt+Pd grades in excess of 80 g/t. Additionally, this target possesses a strong PGM soil geochemical anomaly that is 900 metres by 300 metres in size. Starfield plans to drill one angled core hole through this body to test the PGM content.

“Starfield is currently working with the state of Montana and federal agencies to obtain exploration permitting for the 2010 program,” said Ray Irwin, Vice President of Exploration. “Permits should be in place by mid-summer, and we plan to begin drilling in August.”

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 exploration and development stage company exploring for copper, nickel, and platinum group elements (PGE) in North America. The Company has three main projects: a PGE project in Montana’s Stillwater District; a copper project in California’s historic Moonlight Copper Mining District; and a copper/nickel/cobalt/PGE project in Ferguson Lake, Nunavut. Additional assets include a diamond joint venture in Nunavut, additional copper/nickel/chrome projects in Montana, and a portfolio of eight gold properties in Nevada that are currently under joint venture agreement. Starfield is also funding the development of a novel, environmentally friendly and energy efficient hydrometallurgical process 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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