PROBE MINES LIMITED

TSX-V: PRB

Strategically located in the heart of Canada's two most important exploration plays

August 2010

KEY FACTS

- TSX Venture: PRB
- Market Cap: C$23.99 M
- Shares Outstanding: 36.5 M
  Fully Diluted: 41.6 M
- 52 Week High / Low:
  C$0.68 / C$0.26
- C$4.5 million in cash, no debt

MANAGEMENT TEAM

Patrick Reid
Chairman of the Board

Dr. David Palmer, Ph.D., P. Geo.
President, CEO and Director

Carmelo Marrelli
Chief Financial Officer

Dr. John B. Gammon
Director

Dennis H. Peterson
Director

INVESTOR RELATIONS

Karen Willoughby
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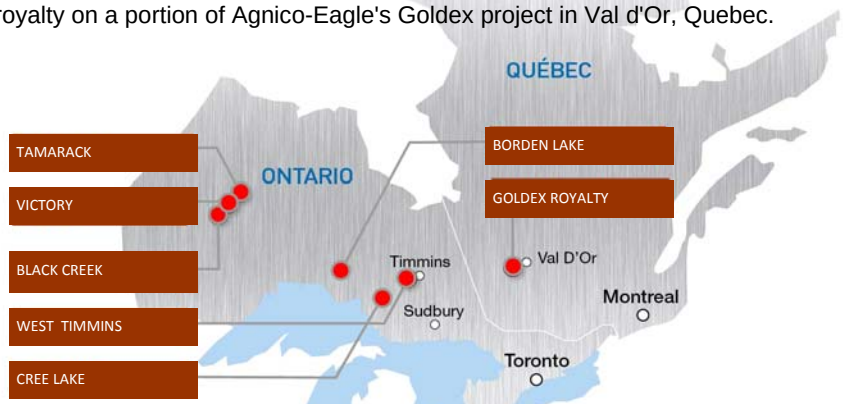
Probe Mines Limited is a well-funded, Canadian base and precious metal explorer led by an experienced management team. The Company has assembled a portfolio of quality projects in the heart of two of the most important exploration plays in Canada; the McFauld's Lake area base metal projects in Northern Ontario and the West Timmins project in the Timmins West Gold Camp. Two promising, grassroots gold projects, the Cree Lake Project near Timmins, Ontario and the Borden Lake project near Chapleau, Ontario have recently been acquired to round out the Company's holdings. Probe also maintains a 5%gold production royalty on a portion of Agnico-Eagle's Goldex project in Val d'Or, Quebec.



Probe Mines' strategy is to aggressively explore its key assets to maximize shareholder value, while joint venturing out certain assets. The Company views joint ventures as excellent opportunities to advance base and precious metal explorations while continuing to focus Probe's resources and treasury on its key projects and project generation and acquisition.

INVESTMENT HIGHLIGHTS

- **The Black Creek chromite discovery is now 100% owned by Probe Mines, following termination of the Probe/Noront JV on August 9, 2010.**
- **NI 43-101 report to be completed shortly on Probe's Black Creek chromite discovery. The 2009 drilling program was drilled to a depth of 200m along a strike length of 200m, and yielded the second-highest grades found in the area to date.**
- **Probe is focusing on expanding the value of its Black Creek chromite asset and will be conducting a third phase of exploration in late August. The upcoming program will drill to 400m, with potential of doubling the deposit.**
- **Cliffs Natural Resources continued its acquisition strategy by acquiring Spider Resources for its interest in the Big Daddy chromite deposit. Probe's Black Creek discovery is strategically located between the Big Daddy and Black Thor deposits.**
- **Significant high-grade gold discoveries continue to be made by Lakeshore Gold in the vicinity of Probe's West Timmins project.**

McFAULD'S LAKE

The McFauld's Lake area continues to receive considerable attention with additional reports of high-grade nickel, copper, chromite and PGE mineralization. Probe Mines has assembled one of the larger land packages in the area, with holdings within all of the prospective settings where major discoveries have been made in the McFauld's area to date, including chromite, nickel, copper, platinum group metals (PGM), base metal volcanogenic massive sulphide (VMS), gold and vanadium. In 2009 Probe discovered the high-grade Black Creek chromite zone and values are amongst the best found to date.

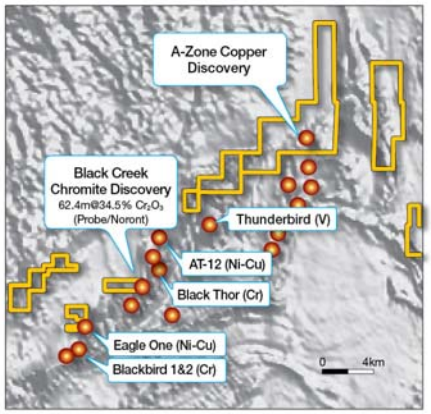
Highlights of the drill program include:

Drill Hole	Width (m)	Cr_2O_3 (%)
MJV09-03	**40.1**	**37.4**
including	25.0	41.0
MJV09-04	**29.3**	**39.2**
including	25.6	42.7
MJV09-05	**50.6**	**32.2**
including	22.2	43.1
also including	7.0	40.3
MJV09-06	**62.4**	**34.5**
including	34	41.4
also including	8.4	43.4

Cliffs Natural Resources (NYSE:CLF), has brought global attention to the area with its continuing acquisition of companies with chromite resources, including Freewest Resources and most recently, Spider Resources. Cliffs is committing significant resources into developing the area into what will be a major mining camp.

Probe will be returning to the area in late August to commence Phase III drilling to expand the Black Creek deposit.

McFAULD'S LOCATION



Legend
- Mineral Discovery
- Probe Mines Claims

TIMMINS WEST GOLD CAMP

The nearby Timmins-Porcupine mining camp is a world-class district, with in excess of 70 million ounces of gold mined over the last century. It has long been recognized that the Timmins West camp, located along strike from the Timmins-Porcupine camp, is a highly prospective area for the discovery of similar mineralization.

The West Timmins Project, under option to Lake Shore Gold consists of two blocks totaling 832 hectares in 52 claims. The West Timmins project is strategically located adjacent to Lakeshore Gold's (LSG) 1.2M ounce Timmins Mine Project and less than 800m from the LSG-WTM recent high-grade gold intersection grading 12.75 g/t gold over 83.4m. Previous drilling on the southwestern section of the West Timmins property identified alterations similar to that associated with this discovery, which have yet to be drilled.

The option expired in June 2010 and is currently being reviewed. A status update will be released shortly.

OTHER PROJECTS

Cree Lake

Located 125 km southwest of the city of Timmins in Ontario, the Cree Lake property consists of 19-claims totaling 4,032-hectares in Swayze township. Earlier programs intersected a volcanic-hosted, quartz stockwork system carrying significant gold values along substantial drill hole widths, which include a 15.5 m interval averaging 2.05 g/t Au. The zone comes to surface, with excellent open-pit potential for a high tonnage, low-grade gold deposit. Probe conducted a drill program in June, 2010. Results are expected shortly.

Borden Lake

The Borden Lake property located near Chapleau, Ontario, represents a new surface gold discovery, identified over an area 150m long by up to 45m wide, hosted by a highly altered and metamorphosed suite of rocks within the volcano-sedimentary horizon. Grab samples from selected outcrop returned values of up to 3.4 g/t gold, and the property is considered to have excellent potential to host a low-grade, bulk tonnage deposit.

Assay results from the June drill program are expected shortly.

CONTACT

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