

1 Exploration History and Discovery – Birch Mountains

The Legend property, which is located in the Birch Mountains approximately 430 km north of Edmonton and 135 km northwest of Fort McMurray, was permitted to a joint venture between Montello Resources Ltd. and Redwood Resources Ltd. in 1997. From March to June 1998, a 42,770 line-km fixed wing aeromagnetic survey was flown and processed. In August 1998, Kennecott Canada Exploration Inc. became the operator with Montello and Redwood. Thirty-five targets were selected based on the aeromagnetic survey.

During September to November 1998 and January to February 1999, ground and heliborne geophysical surveys were completed on 27 of the 35 targets, of which, 14 targets were tested with 19 drill holes totalling 2,713 m. The drill results are summarized below.

- From September to November 1998, eleven drill holes were drilled on eight targets and seven kimberlites were intersected: Phoenix, Roc, Dragon, Valkyrie, Pegasus, Xena and Legend. With the exception of the Dragon pipe, which has a negative magnetic response, all of the kimberlites have a positive magnetic response. The kimberlites were encountered at depths of between 12 m (Legend) and 136 m (Dragon).
- During January to February 1999, eight drill holes were drilled on seven targets, including further drilling on one target (Phoenix pipe) that was initially drilled in 1998. No kimberlite was intersected. However, it was inferred by Kennecott that the Gryphon target is a kimberlite due to the profile of the negative magnetic response and anomalous indicator-minerals from material sampled at the bottom of the drill hole.

Arvanis (1999) suggested that the Legend property contains at least another six kimberlites as defined by magnetic data. These targets include: Shedu, Lammasu, Kendu, Dutchman, Hippogriff and Gemini. During 2000, due to poor diamond content and invested interests in other parts of Canada, the permits were allowed to lapse.

New Blue Ribbon Resources Ltd., in a joint venture with Montello Resources Ltd., permitted the property and in November 2000 drilled one of the geophysical targets identified by Kennecott and discovered an eighth kimberlite in the Birch Mountains field, the Kendu kimberlite, at a depth of 91.4 m. Despite an abundance of mantle xenoliths and xenocrysts (New Blue Ribbon Resources Ltd., 2001a), caustic fusion on a split of the Kendu core did not return any diamonds (New Blue Ribbon Resources Ltd., 2001b).

Several unsuccessful ventures have taken place in the Birch Mountains in early 2002. These include:

- January 2002: Shear Minerals Ltd., Marum Resources Inc. mitigated a joint venture with Birch Mountain Resources Ltd. and conducted a four drill hole program
- February 2002: Shear Minerals Ltd., Marum Resources Inc., New Blue Ribbon Resources Ltd. and Montello Resources Ltd. entered into an exploration option agreement that tested the Hippogriff anomaly
- April 2002: New Blue Ribbon Resources Ltd. tested the Lammasu target

2 References

- Aravanis, T. (1999): Legend property assessment report, Birch Mountains area, Alberta; Alberta Energy and Utilities Board, Alberta Geological Survey, Assessment File Report 20000003, 23 p.
- New Blue Ribbon Resources Ltd. (2001a): Exploration update; news release, January 15, 2001 (available 29-Aug-02 at <http://www.newblueribbon.com/s/NewsReleases.asp>).
- New Blue Ribbon Resources Ltd. (2001b): New Blue Ribbon Alberta JV sampling yields no diamonds; news release, March 15, 2001 (available 29-Aug-02 at <http://www.newblueribbon.com/s/NewsReleases.asp>).