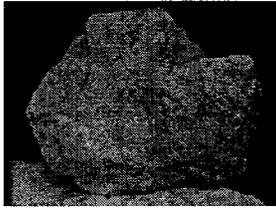


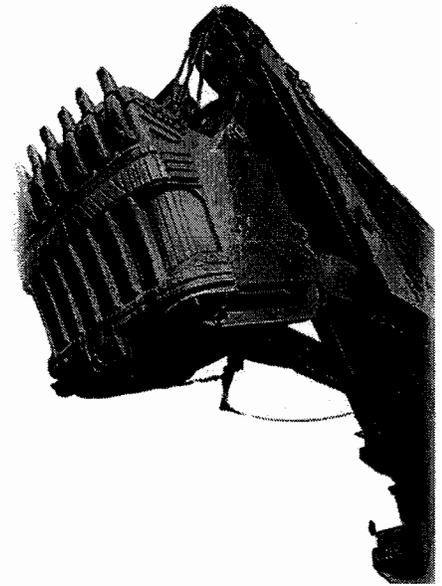
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## **Abstracts**

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## **THE WICHEEDA CARBONATITE-SYENITE BRECCIA INTRUSIVE COMPLEX HOSTED RARE EARTH DEPOSIT**

A Significant New Discovery in the Search for an Important North American Source of Rare Earth Minerals to meet their Increasing Demand and Strategic Role in the future Economy

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The Wicheeda Property is owned 100% and operated by private company Spectrum Mining Corporation and comprised of 17 mineral claims totalling 6011.53 hectares in the Cariboo Mining Division of British Columbia. It is located approximately 80 km northeast of Prince George within the Rocky Mountain Trench on the continental Arctic-Pacific, Parsnip River – Fraser River, drainage divide and topographical arch.

The Wicheeda property is situated close to major infrastructure including power transmission lines, railway and major highways. It is readily accessible from Prince George by travelling highway 97 for 80 km north to the community of Bear Lake and then going east for 50 km along the all weather Chuchinka Forest Service Road.

The Wicheeda Carbonatite-Syenite breccia intrusive complex is presently of undertermined age. No radiometric age dates have been obtained and it is likely related to the Devono-Mississippian group of alkaline/carbonatite intrusive bodies emplaced into the old North American continental margin which roughly follows the Rocky Mountain Trench. There are several intrusive carbonatite bodies in the Wicheeda area which form a northwest-southeast trend over 15 km long and 2 km wide. These intrusive rocks are emplaced into sediments that are tentatively assigned to the upper Cambrian to Ordovician Kechika Group, however that assumption has not been substantiated through modern mapping by the GSC and may be incorrect. The sedimentary rocks exposed on the Wicheeda property are a sequence of interbedded limestone, siltstone, calcareous argillite and argillite with consistent northwest trending attitudes and subvertical dips.

The intrusive rocks of the Wicheeda “Main Zone” consist of a massive dolomitic-ankeritic body that overlies a thick monolithic syenite breccia unit. The carbonatite body outcrops over most of its extent with little to no overburden cover and is quite coarse grained with individual dolomite-ankerite phenocrysts up to 5 cm across. Minor constituents include K-spar, black biotite, cordierite, pyrochlore, columbite, magnetite, pyrite and limonite as well as coarse grained, rare earth enriched, monazite and a bastnaesite-synchisite-parasite mineral. The syenite breccia clasts vary up to 30 cm in size and perhaps more. The spaces between the clasts are infilled or mended by dolomitic carbonatite identical in composition to the overlying massive carbonatite body. The relative amount of syenite breccia clasts to carbonatite matrix infilling material varies from 10% clasts and 90% carbonatite to 90% clasts and 10% carbonatite. No true intact syenite body has been discovered on the property to date.

At one drill site approximately 400 m north of the “Main Zone” drill holes have intersected the same syenite breccia unit, however the carbonatite matrix infilling material is calcite instead of dolomite and the individual clasts are rimmed by up to ½ cm of black biotite. This rock is quite striking to observe.

The first reported mineralization in the Wicheeda area were zinc showings discovered by prospector Kol Lovang in the late 1970's and more detailed assays of his rock samples indicated they contained significant niobium contents. The niobium potential interested Teck Corporation and from 1985-1987 they conducted follow up geological mapping, surface soil sampling and blast trenching exploration programs that outlined several areas enriched in the lanthanide suite of light rare earth elements as well as niobium, barium, strontium, zinc and fluorine.

The "Main Zone" soil anomaly as outlined by the 400 ppm cerium soil contour is 1km long and up to 500m wide within which the 5000 ppm contour is roughly 300m long and 200m wide. Peak values range up to 25,000 ppm cerium. Several other high value cerium soil anomalies continue for over 600m northwest along strike from the "Main Zone". These cerium soil anomalies are also anomalous in niobium and barium. A ground magnetometer survey has outlined a magnetic high anomaly on the north side of the "Main Zone" measuring roughly 500m north- south and 1 km east-west.

These mineral showings and soil anomalies were never tested by drilling and the claims were eventually allowed to lapse. In 2001 the property was restaked by the author Chris Graf who subsequently incorporated Spectrum Mining Corporation to fund and conduct drilling on the indicated rare earth mineralized targets.

In 2008 Spectrum Mining Corporation contracted Falcon Drilling Ltd. of Prince George, B.C. to drill 4 BTW size diamond drill holes, totalling 866 m, at varying azimuths and dips from 1 drilling platform into the "Main Zone" cerium soil anomaly. All 4 drill holes intersected significant rare earth mineralization over drill core lengths varying from 66 m to 231 m starting at their collars. The highest grade intersections from the 2008 program include a 48.64 m interval in hole 2008-02 which averaged 13,570 ppm (1.36%) cerium, 17,806 ppm (1.78%) lanthanum, 1,344 ppm (.13%) praseodymium and 2,780 ppm (.28%) neodymium for a combined rare earth element content (REE) of 3.55% over 48.64 m.

Spectrum Mining Corporation shareholders regarded these initial results to be sufficiently encouraging to fund a larger drilling program designed to expand the tonnage of the Wicheeda deposit and contracted Falcon Drilling Ltd to conduct the work. In 2009, eleven NTW diamond drill holes totalling 1835 m were drilled into the "Main Zone" from 2 new drilling platforms. All eleven drill holes intersected significant rare earth mineralization and the Wicheeda deposit remains open in all directions.

Drill site 2009-A is located approximately 100 m northeast of the 2008 drill site and seven 150 m long drill holes were completed from it at various azimuths and dips. All seven holes intersected significant intervals of rare earth mineralization varying from 56 m to 148 m long starting at their collars.

Drill site 2009-B is located approximately 100 m north of drill site 2009-A and approximately 150 m northeast of the 2008 drill site. Four drill holes were completed from it at various azimuths and dips. Again all four holes intersected significant intervals of rare earth mineralization varying from 95 m to 147 m long starting at their collars. Examples of some of the intersections are 144 m averaging 12,924 ppm (1.3%) Cerium, 6,403 ppm (.64%) Lanthanum and 2,599 ppm (.26%) Neodymium in hole 2009-09 (2.2% REE over 144 m) and 72 m averaging 18,310 ppm (1.83 %) Cerium), 7,296 ppm (.73%) Lanthanum and 3,547 ppm (.35%) Neodymium in hole 2009-07 (2.92% REE over 72 m).

An important economic aspect is that the “Main Zone” outcrops on the front of a readily accessible ridge with little to no overburden which would allow it to be mined by an open cut with basically no strip ratio.

In 2009 Spectrum also completed three diamond drill holes to test two separate cerium- niobium soil anomalies within the Carbonatite-Syenite breccia complex approximately 400 meters north of the “Main Zone”. Two of these drill holes from one drill site intersected up to 150 meters of calcium dominated carbonatite-syenite breccias with lower grade rare earth assays. One drill hole on a separate target intersected a 15 m thick interval of dolomite carbonatite identical to the “Main Zone” which contained significant amounts of rare earth mineralization.

World recognized carbonatite-rare earth mineralization specialist Anthony Mariano visited the Wicheeda project during the 2009 drilling program and has subsequently examined drill core samples as well as rock samples that he collected on the site.

His analytical work including SEM and cathodoluminescence indicates that the Wicheeda mineralization is mainly quite coarse grained (0.2 mm to 0.5 mm) monazite and a bastnaesite-synchisite-parasite mineral. He has also conducted a bench scale heavy liquid and magnetic separation study on a composite sample of Wicheeda drill core and was able to produce a high grade REE concentrate that contained 56.09 wt. % REE. This test indicates that the Wicheeda rare earth mineralization is simple and easy to produce a marketable concentrate from compared to most other world rare earth deposits including the dormant world class rare earth mine at Mountain Pass in California.

By also applying a flotation circuit it should be easy to produce a 60% LREE concentrate from Wicheeda which would exceed the concentrate grade from Mountain Pass which for over 40 years was main North American mine supplier of rare earth products to the world.