



ASX ANNOUNCEMENT

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# DRILLING CONFIRMS A MAJOR MULTI-ELEMENT AND MINERAL ALTERATION SYSTEM WITH ANOMALOUS URANIUM IN PROTEROZOIC ROCKS IN BOTSWANA

### SUMMARY

- Impact's maiden drill programme at the Red Hills Uranium Prospect in Botswana has identified an extensive alteration system at least 1.5 km long and 1 km wide comprising multi-metal and mineral assemblages typical of those associated with major Proterozoic uranium deposits;
- The alteration comprises intense and extensive deep-red haematite, specular haematite and chlorite developed in basement granite and sedimentary rocks of the overlying Proterozoic Palapye Group;
- A total of 763 one metre samples of 3,229 metres drilled (24%) were sent for assay with significant intercepts as follows:

RHRC001:	32 m at 0.11% Total Rare Earth Elements (TREE) from
	85 m; and
	56 m at 0.1% TREE and 16 ppm U <sub>3</sub> O <sub>8</sub> from 166 m;
RHRC009:	17 m at 0.14% TREE and 13 ppm U <sub>3</sub> O <sub>8</sub> from 55 m; and
	31 m at 0.1% TREE from 86 m;
RHRC010:	32 m at 0.13% TREE and 10 ppm U <sub>3</sub> O <sub>8</sub> from 45 m;
RHRC011:	48 m at 0.13% TREE from 36 m; and
	31 m at 15 ppm U <sub>3</sub> O <sub>8</sub> from 111 m;
RHRC014:	57 m at 0.1% TREE from surface, including
	24 m at 0.15% TREE and 20 ppm uranium from 6 m;
	and 12 m at 0.1% TREE from 214 metres

- These intercepts are in part coincident with similar thick intercepts of anomalous silver, lead, zinc and other metals;
- A significant result of 94 m at 65 ppm U<sub>3</sub>O<sub>8</sub> from 108 m was recorded from RHRC008 with a portable XRF analyser. Samples from this drill hole and 3 others have been sent for assay with results due in January;
- The alteration zone contains a central elongated core of very intense specular haematite alteration that is up to 100 m thick, 400 m wide and at least 1.5 km long that occurs within a regional fault zone that extends for at least 60 km along strike within Impact's Licences.
- Further work programmes including follow-up drilling early in 2012 are being prepared.



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## BOTSWANA DRILLING CONFIRMS A MAJOR MULTI-ELEMENT SYSTEM

Impact Minerals Limited (ASX: **IPT**) is pleased to report that its maiden drill programme at the Red Hills Prospect, part of the Company's 100% owned major Botswana Uranium Project (Figure 1), has identified an extensive alteration system, at least 1.5 km long and 1 km wide, comprising multi-metal and mineral assemblages typical of those associated with some of the World's largest and very high grade uranium deposits of similar, Proterozoic age.

The Red Hills Prospect occurs at the western end of a 60 km long by 3 km wide structural and stratigraphic corridor within which the sedimentary rocks show intense and widespread haematite and chlorite alteration, with local large airborne uranium anomalies (Figure 2). Analyses of surface rock samples are very anomalous, with up to about 100 ppm U<sub>3</sub>O<sub>8</sub> and up to 0.6% total rare earth elements (TREE). These features are similar to those around major Proterozoic unconformity-style uranium deposits elsewhere, such as Cigar Lake (209 Mlb at 17% U<sub>3</sub>O<sub>8</sub>) in the Athabasca Basin in Canada and the Ranger Mine (350 Mlb at 0.1% U<sub>3</sub>O<sub>8</sub>) in the Pine Creek area of northern Australia.

The maiden drill programme at Red Hills comprised 17 reverse circulation (RC) holes drilled 200 m apart on three traverses spaced at 500 m and 800 m along strike. Most holes were to depths of about 180 m, for a total of 3,229 metres. The holes were designed to test for unconformity-style uranium deposits near the base of the early Proterozoic Palapye Group sedimentary rocks, both within the sedimentary rocks and within structures in the underlying basement granites.

A total of 763 samples from five holes (RHRC001, 009, 110, 111 and 114) were sent for analysis for a suite of 62 elements by ICP-MS, ICP-OES and fire assay. The samples were selected solely on the basis of anomalous uranium results from the down-hole probe.

#### Results

The drilling at Red Hills has shown that the Palapye Group comprises conglomerates, sandstones and siltstones up to 80 m thick overlying basement granite (Figure 3). On all three drill sections the granite has been intensely and pervasively altered by deep red haematite, specular haematite (shiny and reflective) and chlorite. Within this alteration zone, which is open-ended in all directions, there is a central elongated core of much more intense specular haematite alteration that is up to 100 m thick and 400 m wide and that extends the length of the 1.5 km section drilled (Figure 3).

In addition this intense alteration is largely constrained to a major regional fault zone that has a strike extent of at least 60 km and that was identified by Impact in the regional airborne magnetic and radiometric data (Figure 2).

The drilling has intersected this fault zone in many holes, and has identified quartzhaematite breccias that contain quartz-carbonate-fluorite veins in places (Figure 3).

Significantly, the alteration minerals, the fault-hosted breccias and these anomalous element associations are characteristic of the unconformity-style uranium deposits.



The significant analytical results, which are for samples of basement granite except where stated, are summarised below:

RHRC001:	32 m at 0.11% TREE from 85 m; and 56 m at 0.1% TREE and 16 ppm U <sub>3</sub> O <sub>8</sub> from 166 m;
RHRC009:	17 m at 0.14% TREE and 13 ppm U <sub>3</sub> O <sub>8</sub> from 55 m; and 31 m at 0.1% TREE from 86 m;
RHRC010:	32 m at 0.13% TREE and 10 ppm U <sub>3</sub> O <sub>8</sub> from 45 m;
RHRC011:	48 m at 0.13% TREE from 36 m; and 31 m at 15 ppm U <sub>3</sub> O <sub>8</sub> from 111 m;
RHRC014:	57 m at 0.1% TREE from surface, including 24 m at 0.15% TREE and 20 ppm uranium from 6 m in sedimentary rocks and basement granite; and 12 m at 0.1% TREE from 214 metres.

In addition many samples returned similar thick intercepts with anomalous silver, lead, zinc and other metals.

Samples from drill hole **RHRC008** were analysed using a portable XRF analyser and a significant result of 94 m at 65 ppm U<sub>3</sub>O<sub>8</sub> from 108 m was recorded in the main zone of intense specular haematite in sedimentary rocks and underlying basement granite. It is possible that uranium grades are increasing to the east. Samples from this drill hole and three others have been sent for chemical assay for confirmation. Results are due in January.

### **Implications for Exploration**

All of the work reported here has very important implications for the uranium potential of Impact's licences in Botswana. The company's initial concept for the presence of Proterozoicage unconformity-related deposits has been re-inforced with multiple avenues of evidence: the mineral alteration assemblages, the nature of their host-rocks, the altered fault breccias and the regional fault control, and the thick drill intercepts with anomalous Rare Earth Elements and other metals.

Unconformity-related deposits of Proterozoic age occur in two global regions: the Athabasca Basin of Canada, and the Pine Creek Orogen of northern Australia. Together they contain six of the 17 largest uranium deposits in the world and have ore grades that are measured in the range of 0.1% to 22% (at McArthur River in Canada). The Mahalpye Complex identified by Impact in Botswana has a similar aerial extent to the Athabasca and Pine Creek regions.

Further work programmes, which will include further drilling at Red Hills, are being prepared.

Michael Ans

Dr Michael G Jones Managing Director

The review of exploration activities and results contained in this report is based on information compiled by Dr Mike Jones, a Member of the Australian Institute of Geoscientists. He is a director of the company and works for Impact Minerals Limited. He has sufficient experience which is relevant to the style of mineralisation and types of deposits under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the December 2004 edition of the Australasian Code for reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code). Mike Jones has consented to the inclusion in the report of the matters based on his information in the form and context in which it appears.



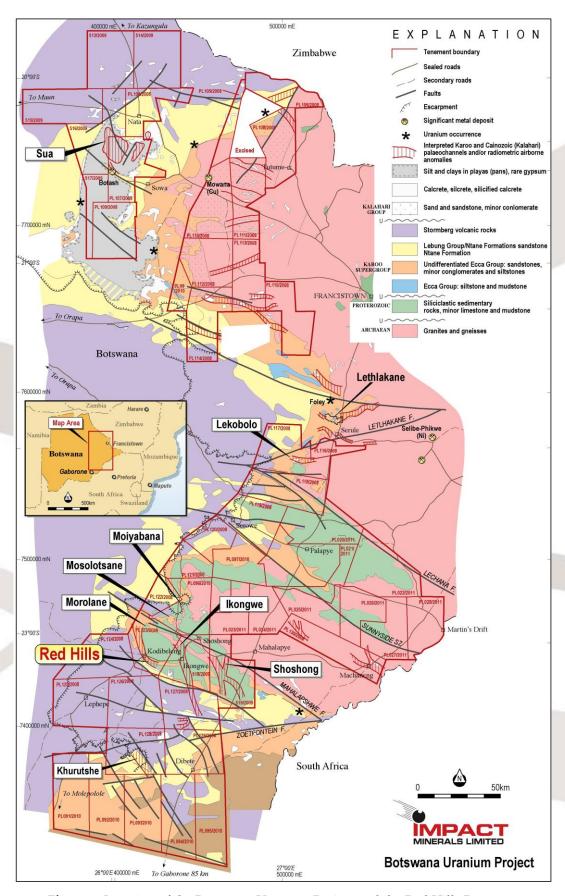
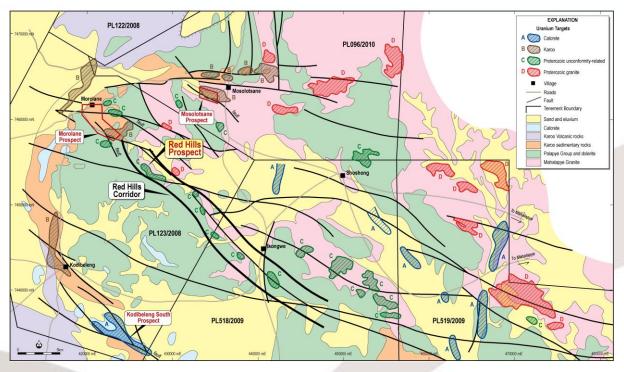


Figure 1. Location of the Botswana Uranium Project and the Red Hills Prospect.

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Figure 2. Location of the Red Hills Prospect and the Red Hills Corridor.

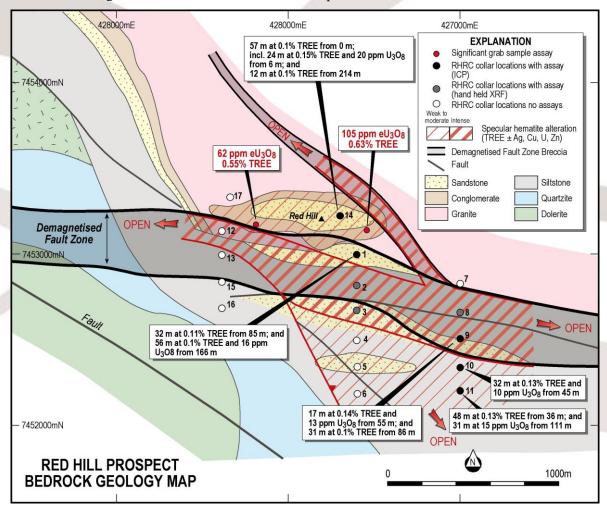


Figure 3. The geology and alteration system at the Red Hills Prospect.