

## **BERNARD GOLD PROJECT UPDATE**

### **HIGHLIGHTS**

- **Seismic and magnetic survey completed over project.**
- **Additional zones of potential mineralisation detected.**
- **Results indicate epithermal activity with potential for a bulk-mineable mineral system.**
- **Stage two drilling to include three new drill targets.**
- **Drilling will now commence in March.**

Uranium Company of Arizona (UCA), a wholly owned subsidiary of Monaro Mining NL (“Monaro”), has recently undertaken a program of geophysical evaluation of the detachment fault mineral system and, more particularly, upon the Company’s Bernard Claims at its 90% owned Bernard Gold project in La Paz County, western Arizona.

The Bernard Gold Project is testing for mineralisation associated with “detachment faulting” occurring within a complex of sediments and intrusives of variable age. The detachment faulting tends to be a flat lying zone which separates “Upper Plate” and “Lower Plate” rocks.

Within Bernard’s Lower Plate rocks there are numerous sub-parallel structures which often host gold and copper bearing breccias zones. Numerous prospect pits, open cuts, adits and shafts are located in or near these breccias zones. The Bernard gold vein is the most significant prospect within the claim block.

The Copperstone Mine (currently being operated by American Bonanza Corporation) is located approximately 70kms to the south west of Bernard and lies in a similar geological setting. This mine has produced some 500,000 oz of Au at an average grade of 3.8 g/t Au and the mine has currently defined resources of approximately 400,000 oz Au.

Monaro recently completed an encouraging first phase drilling programme at Bernard and announced that it would be progress to a second stage of drilling commencing this month (see February 3<sup>rd</sup> 2010 ASX release on [www.monaromining.com.au](http://www.monaromining.com.au)).

Hydro Geophysics Inc. of Tucson Arizona was engaged by Monaro to conduct a Reflection Seismic and Ground Magnetic test on the Bernard project.

The purpose of the ground magnetic survey was threefold:

1. To determine whether or not magnetic data might be of general use in geologic mapping in the project area;
2. To determine if there is a magnetic signature to the Bernard vein; and
3. To determine if ground magnetic data could be effectively acquired in the surrounding terrain.

The purpose of the reflection seismic survey was four-fold:

1. To determine whether or not reflection seismic could identify a contact between the bottom of a detached plate and the underlying lower plate;
2. To allow thickness determinations of the upper plate to aide in the planning of drilling;
3. To detect and map variations in character related to the contact that might have exploration significance and;
4. To detect any structural features that might be identifiable within either of the plates.

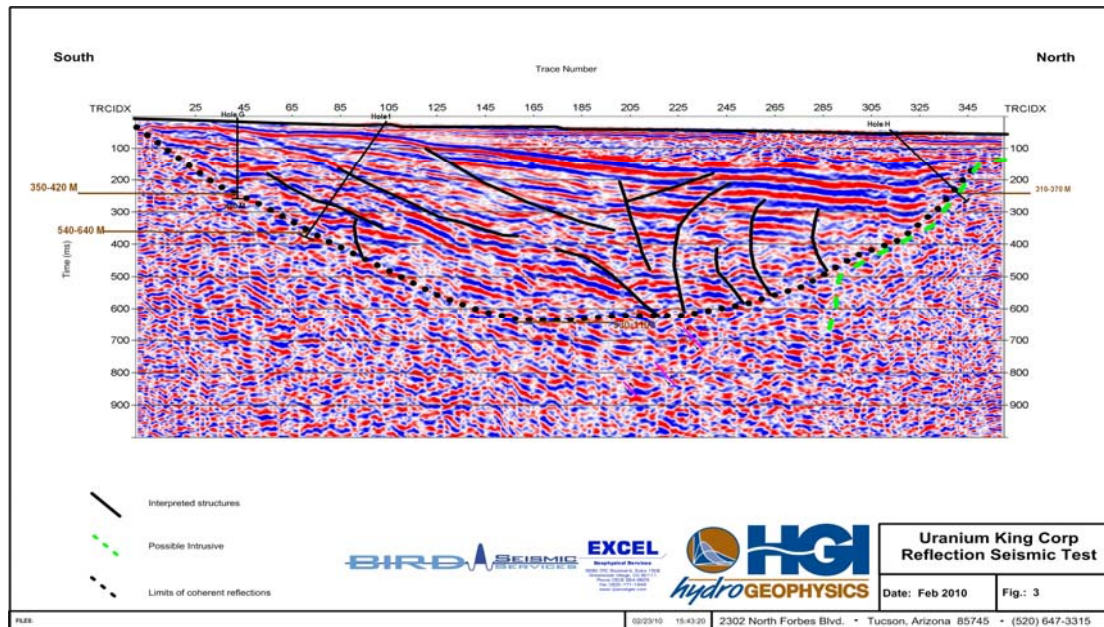
Results: The initial assumption was that the Bernard vein would be expressed as a magnetic low because it was filled entirely with non-magnetic material. The survey result, however, showed not only that the Bernard vein expressed itself as a “diapole” anomaly, but the survey detected additional zones of interest not previously recognized.

This discovery has several important impacts. The Bernard vein and similar Lower Plate veins must now be regarded as being similar to known epithermal mineral systems in which economic ores are found not only in the vein per se but in surrounding rock. In part, this goes a long way toward explaining why visible gold was encountered far above the Bernard vein in Hole C1. We must now regard the Bernard vein system and similar parallel veins in the lower plate as potentially being part of a bulk-mineable mineral system. The importance of the Phase 2 drill program is now greatly increased.

In addition, the magnetic survey discovered additional “diapole” targets that are not related to known surface geology. In other words, the number of drillable targets has been greatly increased by the geophysical survey technique.

An even more exciting result came out of the initial seismic survey profile that was conducted over UCA’s new Bernard claims lying west of the original block of claims. The result from a single survey line is immensely gratifying. Not only has the processed seismic data identified a surface that probably represents the detachment fault itself but it has also identified linear features in the Upper Plate that are most likely faults and which could host mineralization. In addition, interpretation of the seismic data by a well-respected geophysicist shows one area where an igneous body may have intruded the detachment fault.

This possibility has significant implications for exploration. It is known from nearby areas that uranium is enriched immediately down section from such late stage intrusives, and it is known that significant mineralization of base and precious metals is locally controlled by such intrusives.



***Seismic Profile Showing the Locations of Borings to Test the Detachment Fault Mineral System***

The processed seismic data is so definitive that even a person untrained in geology and geophysics can readily see the change in character followed by the convex dotted line that separates the Upper Plate, with strongly linear character, from the basement having faintly linear character in the Lower Plate. The interpreted igneous rock lies to the right of the dashed green line and is represented by a mixed, faintly linear to non-linear, homogenous character.

Within the upper plate, the present interpretation shows possible faults as black lines. Some of these are sub-parallel to the main detachment fault and may be subsidiary detachment surfaces. Other interpreted faults are at a higher angle and may represent faults caused by stretching and rotation of rocks in the Upper Plate.

As presently interpreted the detachment fault reaches its greatest depth near the centre of the profile. This depth is between 930 meters and 1,100 meters below the ground surface.

It is fortunate that the Phase 2 drill program on the Bernard Project, which was due to commence in early February 2010, has been delayed due to weather conditions since these geophysical findings demand that the program be altered to include three additional drill holes. These holes will be placed in a manner that will evaluate the seismic interpretation as to the depth of the detachment surface, the location and mineral potential of faults in the Upper Plate and the contact of the Upper Plate with the possible igneous intrusive identified to exist at the north end of the seismic line. As an additional benefit, these three holes will confirm the seismic interpretation and will “calibrate” the seismic modelling so that future surveys will be even more informative.

Hole ID	Inclination	Azimuth	Length
G	-90	NA	400 +/- meters
H	-60	360	390 meters
I	-70	180	610 meters

Hole ‘G’ will test the seismic model at a location near its mapped outcrop and will also test the detachment fault directly down dip from surface mineral. Outcropping mineral has been sampled and analyses show anomalous gold of up to 0.042 g/t, silver up to 7 g/t, iron up to 16%, manganese up to 0.25%, lead up to 0.093%, zinc up to 0.49%; and copper up to 5.56%. This by now familiar assemblage of metals is indicative of the detachment mineral system and will provide a basis by which drill hole mineralization may be judged.

Hole ‘H’ will test the interpreted igneous contact at the north end of the seismic profile. Additionally, the hole will test the upper portion of the detachment system in the immediate area of the igneous intrusive to evaluate alteration and mineralization that may be associated with the intrusive.

Hole ‘I’ will be a relatively deep test of the Upper Plate and detachment fault. Additionally it will cross two interpreted subsidiary detachment surfaces and test for mineralization in such subsidiary structures.

Monaro intend now to commence the amended upgraded drilling programme (Stage 2) this month. Drilling will take approximately 4-5 weeks to complete.



Monaro own 90% of the Bernard Gold project and the project is Joint-Ventured (“JV”) with Cristol Enterprises LLC (“Cristol”), a company founded in 2009 by Cris Cristea and Corey Tolle. Cristol is a Nevada based Exploration Company specializing in the discovery and development of mineral projects exhibiting significant potential. It is a company closely associated with Arlan River LLC (www.arlanriver.com), whose team of experienced executives has claimed their stake in the mining industry with their recent work on the exploration and development of 36,000 acres in Southwest, Utah. Cristea and Tolle have worked with industry leaders and veteran geologists on this significant site which Arlan River claims is positioned to become a world-class copper discovery. Cristol is led by a team of executives with expertise in operations, metallurgy, geology, strategic planning, technology and investment sourcing and is a company “dedicated to exploring resources to enhance the lives of many through the innovation of mineral discoveries”.

Under the current terms of the JV, Monaro owns 90% of the Bernard project with Cristol owning the remaining 10%, having completed the initial US\$380,000 expenditure commitment for Stage 1 of the JV. Stage 2 involves Cristol spending another US\$700,000 for a further 10%. After this Cristol can spend, in three more stages, an additional US\$3.2 million (for a total of US\$4.28 million) for 51% of the project.

Jim Malone  
Executive Chairman.

## **COMPETENT PERSON**

*The review of exploration activities and results contained in this report is based on information compiled by Mr. D Geldard, Executive Director of Monaro Mining N.L. and Mr. David S. Boyer. Mr. Geldard is a Member of the Australasian Institute of Mining and Metallurgy. 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). Mr. Boyer is a licensed geologist registered in the State of Washington No. 2400 and is a member of the Society of Economic Geology and Arizona Geological Society. He has significant experience relevant to the style of mineralisation and types of deposits under consideration. Both gentlemen consents to the inclusion of this information in the form and context in which it appears in the presentation.*

## **FURTHER INFORMATION**

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