

# QUARTERLY REPORT

FOR THE THREE MONTHS  
ENDING 31 DECEMBER 2009

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## HIGHLIGHTS

- **Review of data and resource modeling exercise to define drill targets nearing completion for Apex/Lowboy uranium project.**
  - **Drilling permitting completed at Apex uranium project, with drilling to commence in March/April 2010.**
  - **Work commenced on Rio Puerco drill target review with drilling planned for June 2010.**
  - **Bernard results to be released first week in February. Stage two drilling is expected to commence early February 2010.**
  - **Corporate activity increasing.**
  - **ADR programme in USA to be reactivated.**
  - **Company head office relocated to Perth, Australia.**
  - **Board changes to bolster management expertise.**
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## 1 EXPLORATION OVERVIEW

Monaro Mining NL is focused on the USA gold and uranium operations, with the Company's targets for the next two quarters being to:

- Commence drilling the 90% owned Bernard gold project in the first week of February 2010.
- Finalize the geological modeling and interpretation of the Apex Lowboy uranium project and define targets for drill testing.
- Finalize the drilling permits at Apex- Lowboy with drilling to commence on this project in March/April 2010.
- Expectation to drill the Rio Puerco uranium project in the second quarter of the calendar year.
- Finalize negotiations with parties in the USA about corporate activity involving the acquisition of one or more significant uranium projects in the USA.

The tempo of exploration activities has continued to increase over the last quarter, resulting in a number of significant developments for the Company. Of most significance has been the upgrading of the uranium mineral resource at the Rio Puerco deposit in New Mexico, USA. This is based on an intensive program of drill hole re-evaluation and interpretation, resulting in a 250% increase in the JORC inferred uranium mineral resource.

The following sections provide further detail on the Company's projects.

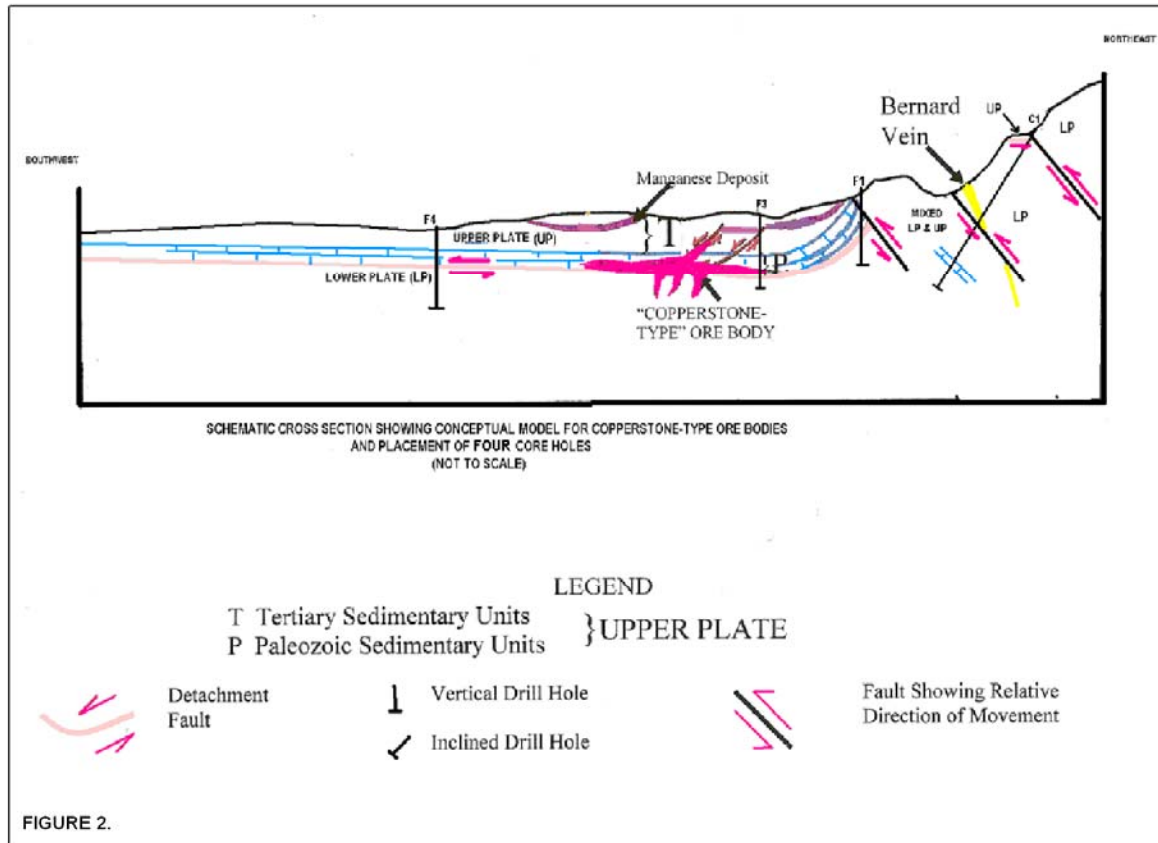
## 2 BERNARD GOLD PROJECT (MONARO REDUCING TO 49%)

Monaro intends to finalize and announce results from the initial exploration drilling program (1,076m / 3,530 feet of drilling has been completed) at the Bernard Gold Project located in Arizona by early February 2010. At this stage, subject to the final results, the Company's joint venture partner Cristol Enterprises LLC ("Cristol") has agreed to immediately commit to a second stage drilling program which should commence in the next week.

The exploration program is being funded by Cristol under the terms of an AUD\$5.3M farm-in agreement with Monaro's wholly owned subsidiary Uranium Company of Arizona LLC ("UCA"). Cristol is an exploration company based in St.Louis, USA and specializes in the discovery and development of mineral projects exhibiting significant resource potential.

The Bernard Gold Project is testing for gold mineralization associated with the Rawhide detachment fault, a structurally complex package of sediments and intrusives of variable age which occur within this "detachment system". The low angle detachment fault separates red bed and limestone bearing "Upper Plate" rocks from the typically gneiss bearing "Lower Plate" rocks. Numerous sub-parallel structures within the detachment system host gold and copper bearing breccias. Many prospect pits, open cuts, adits, and shafts are located in or near these breccia zones. The Bernard Vein, an intermittently outcropping gold bearing structure with 850m of strike length is a significant prospect within the claim block.

The Copperstone Mine, 70kms south west of the Bernard claim block and currently operated by American Bonanza Corporation, is located in a similar geological setting. This mine has produced 500,000 oz of Au at an average grade of 3.8 g/t Au. American Bonanza Corporation has defined a total (indicated and inferred) gold resource of 401,000 oz Au. Monaro's management and consulting geologists believe that the Bernard claims are prospective for deposits of this size and tenor.



### PROPOSED DRILLING PROGRAM

Subject to the results of the initial drilling programme, a second stage drill campaign has been formulated. This will include one vertical and five inclined core holes to further test the strike length of the Bernard vein system and will entail approximately 1,450 feet (442m) of core drilling. Hole lengths will range from 100 feet to 550 feet (30 - 168 m). One drill hole, using larger diameter core barrels, will twin Drill Hole C1 and evaluate the true extent and tenor of the gold mineralisation that was observed in that drill hole. Permitting has been completed and it is anticipated that drilling on this second stage will commence by early February 2010. The program is expected to take four weeks to complete, with assay results available by the middle of March.

## 3 URANIUM PROJECTS

### 3.1 Rio Puerco Uranium Project: New Mexico, USA (Monaro 100%)

The Independent resource upgrade of the Rio Puerco uranium project located in New Mexico announced in October 2009 demonstrated a 250% increase in the inferred JORC resource to 11.4 million pounds at 900 ppm using a 300 ppm cut off. Considerable upside exists on this project as the current JORC resource has been calculated on only one claim block representing 7% of Monaro's total land holding in the Rio Puerco area. The report indicated that exploration target for the Rio Puerco project was significant with multiple target options defined near the mine site, as well as regionally.

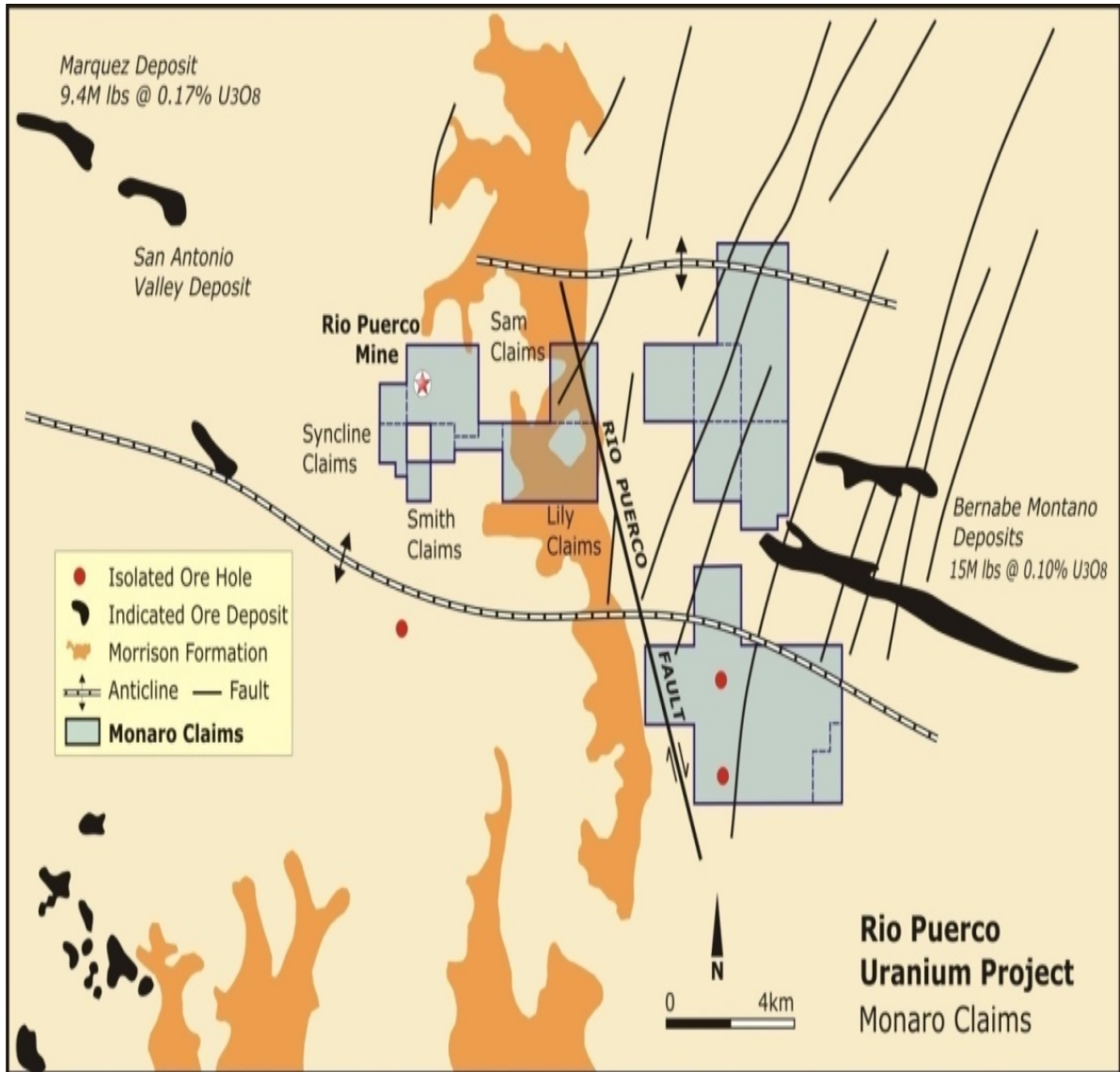
Monaro's technical staff are currently reviewing all geological data and the resource model with a view to identify the best targets to continue to upgrade the resource in size, as well as validating a number of the old drilling targets and increasing the JORC category of the resource from inferred to indicated and measured. Permitting is taking place and it is expected drilling will commence at Rio in the second quarter of the calendar year.

**ABOUT THE RIO PUERCO URANIUM PROJECT, NEW MEXICO, USA.**

A detailed, independent review of the Rio Puerco mine data-set concluded in October 2009. This resulted in a significant increase in the project's uranium "inferred" resource inventory. This re-evaluation, which was initiated to update the previous estimate (4.5 million pounds at 0.12% U<sub>3</sub>O<sub>8</sub>), has seen the JORC "Inferred" mineral resource inventory increased some 250% to 11.4 million lbs. The following table outlines resource estimates based on several differing eU<sub>3</sub>O<sub>8</sub> cut-off grades.

<b>Cut Off Grade*</b>	<b>Tonnes</b>	<b>Average Grade</b>	<b>Tonnes</b>	<b>Lbs</b>
<b>% eU<sub>3</sub>O<sub>8</sub></b>	<b>U<sub>3</sub>O<sub>8</sub> Ore</b>	<b>% eU<sub>3</sub>O<sub>8</sub></b>	<b>U<sub>3</sub>O<sub>8</sub></b>	<b>U<sub>3</sub>O<sub>8</sub></b>
0.03	5,994,968	0.09	5,154	11,362,640
0.05	3,584,925	0.12	4,214	9,290,481
0.10	1,298,081	0.27	3,464	5,778,493

\*See Annexure 1 for explanation of eU<sub>3</sub>O<sub>8</sub>



**FIGURE 1: LOCATION OF MONARO CLAIMS AT THE RIO PUERCO PROJECT**

This resource upgrade was based on the evaluation of 764 drill holes using a block modeling program and validated using the cross sectional method. Confirmatory drilling will now be required to validate the historical drilling, define the disequilibrium and assess the potential for other metals such as molybdenum and vanadium. The project is considered to have the potential for either conventional underground or in-situ leach (“ISL”) mining. The Company believes that confirmatory drilling has the potential to convert the resource into a “measured” category relatively quickly.

A distinct advantage of the Rio Puerco project is that there is significant mining infrastructure already in place, including a 260 metre, 4 metre diameter concrete lined shaft and multiple drives. This work was completed by Kerr McGee in the 1970s for the purpose of mine development and bulk metallurgical sampling and processing. This infrastructure will save the Company millions of dollars in mine development costs, should it be found that conventional mining is the preferred method of extraction.

As part of the re-evaluation study, the potential to increase the extent of uranium resources was also assessed as the host uranium formation extends across to other nearby claims held by the Company. Previous drilling by the Company, and other published data, indicates that further work is warranted to test for potential extensions.

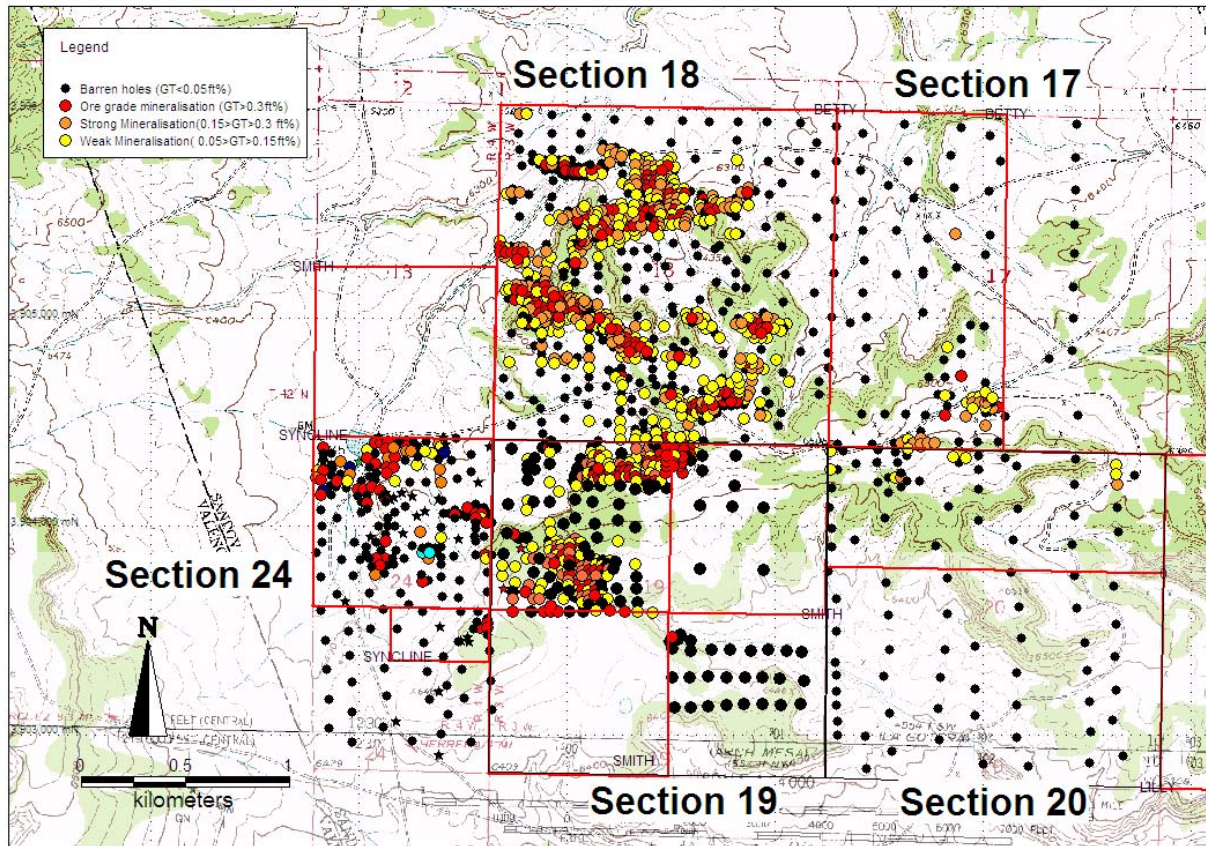
The Rio Puerco mine area is secured by 32 claims over Sections 18 (Betty Claims) and Section 24 (Syncline Claims). The company also holds a number of claims to the east and west of the prospect, the positions of which are outlined in Figure 1.

Without doubt, the Company's Rio Puerco uranium project is located in one of the world's greatest uranium provinces. The Grants Mineral Belt has produced approximately 340M lbs of uranium and is set to resume its mantle of a premier world producing region. The Company's deposit is located only 55 kms east of the Mt Taylor uranium deposit and 65 kms from the Roca Honda uranium deposit. The Mt Taylor uranium mine has produced approximately 8 Mlbs of  $U_3O_8$  before it was shut down in the late 1980s. This deposit is now owned by Rio Grande Resources Corporation and a recent company release indicates that this deposit now contains over 100M lbs of  $U_3O_8$  with an average grade of 0.15% to over 2.0%. The deposit is currently being evaluated for development as an in-situ leach operation. The Roca Honda deposit is owned by Strathmore Minerals Corporation, and based on their published company information, contains approximately 33M lbs of  $U_3O_8$  with grades varying from 0.17% to 0.23%

Previous exploration reports indicate that the Rio Puerco deposit was discovered in 1968 on Section 24, when uranium mineralisation was intersected by drilling to a depth of 254.5m. Between 1970 and 1980, Kerr-McGee reportedly spent US\$17.5million in proving up and developing a resource of approximately 7 million pounds  $U_3O_8$  on land in and around the Rio Puerco mine. A total of 815 holes were drilled for 183,604m on Section 18 and 271 holes for 55,259m were drilled on Section 24 (Figure 2). These two sections contain the bulk of the Rio Puerco Resource which has been previously reported by Monaro to contain 1.93 million tonnes of ore with an average grade of 0.12%  $U_3O_8$  (4.6million pounds contained  $U_3O_8$  ).

The surface geology at Rio Puerco is dominated by the Upper Cretaceous Mancos Shale, which is flat-lying and deeply dissected. The Mancos Shale consists of a series of shale and sandstone beds. Underlying the Mancos Shale is the Lower-Upper Cretaceous Dakota Sandstone and the Upper Jurassic Morrison Formation, which actually outcrop outside of Sections 18 and 24. In descending order, the Morrison Formation consists of:

- The Jackpile Sandstone Member.
- The Brushy Basin (mudstone) Member with lenses of sandstone.
- The Westwater Canyon Member comprising the 'A', 'B', 'C' and 'D' sandstone horizons and interbedded with variable thickness shale beds.



**FIGURE 2: HISTORICAL DRILLING CARRIED OUT BY KERR MCGEE OVER SECTIONS 18 AND 24 AND ADJACENT CLAIMS.**

From the downhole wireline logs it appears that most of the uranium mineralisation occurs within the Westwater Canyon Member near or at the contact between sandstone and shale units. Aerial photo interpretation indicates that the structure around the project area is generally flat-lying or gently warped along E-W and N-S oriented fold axes. The folds are tighter locally and deflect into major N-S striking faults (e.g. Rio Puerco Fault).

Mineralisation at Rio Puerco is postulated to be of the Peneconcordant sandstone hosted type, a characteristic of the Grants Uranium District. These deposits are irregular in shape, are roughly tabular and usually elongated. They range from a few metres in width and length to several tens to hundreds of metres long and occur within humate rich sandstone. The uranium is sourced from nearby volcanics as well as from the devitrification of tuff deposited within the sandstones. The uranium is concentrated within humic acid percolating through the aquifer from the surface, to be eventually trapped by changes in lithofacies or structures and converted to humate during diagenesis and changes in groundwater salinity.

The dominant ore mineral is reported to be Coffinite which is associated with the humate found within the sandstone layers. Uraninite and uranium-organic complexes associated with the humate is not uncommon. The humate is also enriched in a number of other metals including vanadium, selenium and molybdenum. However, none of these elements appear to have received any attention by past explorers. The ore deposits are in general lenticular, tabular masses of interstitial humate and uranium minerals that are roughly parallel to the bedding and generally elongated in the direction of sediment transport of the host rock. Although two general types of deposits are recognized in the area, the Rio Puerco Deposit is believed to be a primary deposit.

Based on the re-evaluation, the Rio Puerco ore body appears to extend into adjacent sections 17, 19, and 20 (refer to Figure 2), with a number of historical drill holes apparently striking ore grade mineralisation. Whilst summary results of drilling have been reported, drill logs to support the data have yet to be found. As a consequence previous reporting of resources within these areas can only be considered as exploration targets.

It is considered that these nearby exploration targets can, in total, range from 400,000 tonnes to 800,000 tonnes with grades varying between 0.05% to 0.20%  $U_3O_8$ . This is equivalent to approximately 1.3 to 2.6 million lbs of  $U_3O_8$ . It should be noted that in this case, the potential quantity and grade is conceptual in nature, and that there is insufficient exploration data to define a mineral resource and that it is uncertain if further exploration will result in the determination of a mineral resource. A drilling program to test the extensions of mineralisation in the adjacent claims has been formulated.

In order to advance the definition of the deposit and upgrade the JORC category to a higher level, a drilling program focused predominantly within Section 18 (refer to Figure 2) has been recommended. The objectives of the program have been defined as follows:

- Completion of a series of diamond drill holes next to recorded high, medium and low grade holes. The results from this drilling will aid in determining the grade distribution as well as testing for variance in disequilibrium with grade.
- A series of percussion or mud rotary drill holes has been recommended for selected locations to “twin” existing holes and confirm the grade using downhole gamma ray, and gamma-ray spectrometry.
- A number of drill holes have been recommended to close off mineralisation.
- Obtain samples for metallurgical purposes, even though the bulk sample was processed with satisfactory recoveries in the 90+% range.

In addition to the above specific recommendations, a number of other tasks have been recommended, being:

- Surrounding water wells to be tested for tracer mineralization.
- Undertake field spectroscopy studies of all available and future core samples to identify alteration haloes around the ore bodies.
- Conduct soil and vegetation sampling and analysis for traces of various metals which may assist in the delineating of vectors to mineralisation.

### **3.2 Apache Basin Joint Venture: Arizona, USA (Monaro reducing to 40%)**

The Company’s joint venture partner in the Apache Basin uranium project, Vale Exploration Canada Inc. (“VEC”), a wholly owned subsidiary of Vale S.A. (“Vale”), has exercised its option under the conditions of its letter agreement with Monaro’s wholly owned subsidiary Uranium Corporation Arizona LLC (“UCA”), to move to become the Operator of the project. Under the terms of the letter agreement, Vale is required to spend US\$3.25M (by way of option payments) to earn a 60% interest in a number of claims covered by the joint venture’s “Area of Influence” (refer to Figure 3). Thereafter, further expenditure will be pro-rata in accordance with each party’s respective interests.

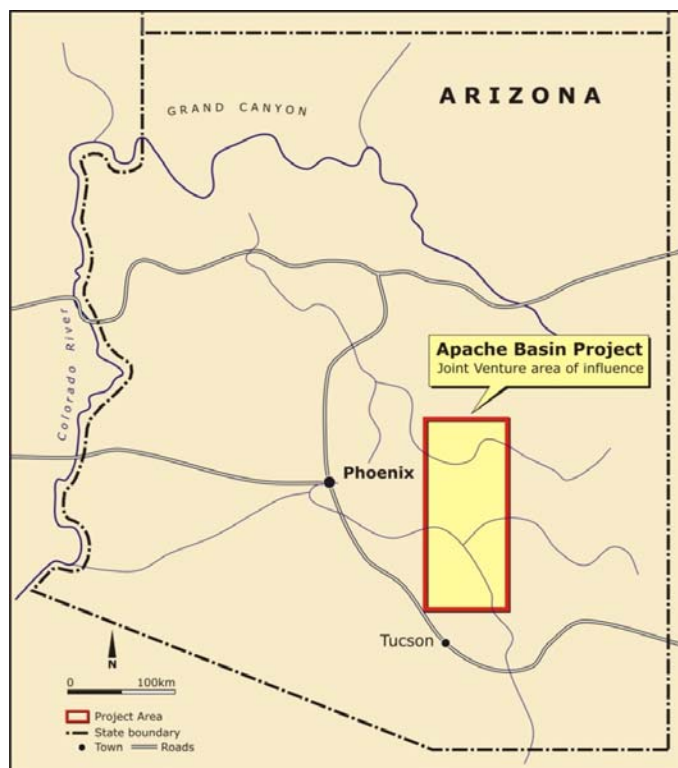


FIGURE 3: LOCATION OF APACHE BASIN PROJECT

The prospectivity of the project area is based on the Unconformity model and its similarities with the Canadian Athabasca Basin, one of the world's premier uranium provinces. Well-developed uranium mineralisation occurs in the Dripping Springs Quartzite, which is the upper target zone, and is associated with well-developed structural controls which are expressed as strong linear radiometric anomalies consistent in placement with the known mineralization and structural trends. Based on the currently available information, the project is highly attractive on a conceptual basis as it represents a significant regional "play" with the possibility of yielding multiple targets. The Company is confident that this potential will unfold during the coming months as a drilling program is planned for early to middle 2010 to test a number of newly defined uranium anomalies.

### 3.3 Apex-Lowboy Uranium: Nevada, USA (Monaro 100%)

A review of the Apex-Lowboy geological model is ongoing by Monaro's USA based consultant geologist David Boyer, chief geologist John Petersen and Executive Director Denis Geldard. A number of drilling targets have been identified including the exploration target of 500,000 pounds identified in the geological assessment performed in February 2009. Additional drilling permits have been obtained, and drilling should commence in March or April 2010. In addition to the exploration target, the regional potential of the Apex-Lowboy project is largely untapped. The Apex-Lowboy contact zone contains approximately 12 km of strike length with a number of mineralized zones previously identified. Paleo channel potential is considered to be high. The uraniumiferous highlands are likely to have been leached and redistributed uranium mineralisation into adjacent sedimentary basins.

The Apex Lowboy uranium project is located in the state of Nevada and is owned 100% by Monaro. A scoping study performed on the project in July 2007 indicated that a profitable, low cost heap leach open cut mining operation at this project would be financially robust.

### **3.4 Kyrgyz Uranium Projects (Monaro 100%)**

The Company has sold a 75% interest in the Kyrgyz Project to Gate Bridge Company Limited ("GBC"); a Hong Kong based resource company. Under the terms of a Heads of Agreement, the Company will retain a free-carried 25% interest in the project until such time as GBC generates a Pre-Feasibility study on any one of the licence areas covered by the agreement.

The agreement is subject to the completion of due diligence investigations by GBC, which has yet to be completed. Upon execution of a share sale agreement, GBC will sole fund all exploration and administrative costs associated with the project. GBC is a Hong Kong based Company owned by a consortium of Hong Kong and Chinese investors and was formed by Mr Geoff Hill, Chairman of International Pacific Securities. Due diligence is expected to be completed in the next two weeks.

GBC proposes to focus on the development of uranium resources in Asia and elsewhere with the view to meeting future Chinese demand.

## **4 CORPORATE**

### **BOARD CHANGES**

Monaro Mining NL is pleased to advise that it has made two changes to its Board that reflects the increased activity of the Company, particularly in the USA.

Monaro's current USA Country Manager, Mr. Denis Geldard, has been appointed to the Board as Executive Director and will continue to oversee all operations in the USA.

Mr. Geldard brings over 40 years technical experience to the Board. Prior to working for Monaro, Mr. Geldard has had extensive experience in exploration and project development in Australia and internationally. Mr. Geldard is a Mining Engineering graduate of the Kalgoorlie School of Mines West Australia. Mr. Geldard has a sound knowledge of Corporate Governance, hands on experience in geology and exploration with advanced skills in the mining and metallurgy of gold, mineral sands, tin and iron ore processes. Mr. Geldard pioneered the first commercial gold heap leaching project in Australia and developed the first commercial Carbon in Pulp processing plant in Australia.

Mr. Geldard has held several senior management roles in the mining industry including directorships of a number of Australian mining and exploration companies.

During the quarter, the Directors resolved under article 15.1 of the constitution that the Chairman Mr. Jim Malone assume the powers of Managing Director (but with the title of Executive Chairman) and under article 15.2 of the Constitution, the Directors also determined that Mr. Malone be paid a consultancy fee of \$12,500 per month as Executive Chairman.

As Executive Chairman, Mr. Malone will work fulltime for the Company effective from the start of the 2010 year, focusing on strategic, corporate, financial and administrative issues as well as overseeing all management and staff, as well as being responsible for the promotion of the Company and investor and shareholder relations.

Mr. Malone has considerable leadership experience in business, and over the past ten years, specifically in the mining and resources industry. Since 1994, he has successfully managed a number of businesses as either Managing Director/CEO or Chairman.

### **CORPORATE ACTIVITY**

The Company recently announced that it had appointed New York based Murdock Capital as its US based corporate advisors. Through this connection, the Company has been introduced to a number of parties with the view of acquiring advanced uranium projects in the USA. The company is confident of closing at least one of these deals in the near future and will keep the market informed of the progress of these negotiations. In addition to this, the Company is hopeful of finalizing deals on its Kyrgyz assets and its NSW base metal projects in the very near future.

### **USA ADR TRADING PROGRAMME UPDATE**

The Company is also working closely with Murdock Capital and other groups to reactivate the Company's ADR programme on the OTC market in the USA. This will allow US domiciled investors to trade in Monaro shares through the ADR and will lead eventually to the Company having the ability to raise capital in the USA. Monaro believes that this will be a significant advantage to the Company as there is considerable interest in the Company in the USA amongst investors and small funds, with the strategy being to reactivate this programme to allow trading of the ADRs by March 2010.

### **RELOCATION OF HEAD OFFICE**

In an attempt to decrease overhead costs and as a reflection of the domicile of the new management team, the company has closed its Sydney office and relocated its Australian head office to Perth, Western Australia. The new office is now located at 103 Abernethy Road Belmont, WA, 6104. The telephone number is +61 8 9277 9782 and the fax number is +61 9277 6818. The new postal address is PO Box 1788, West Perth, WA, 6872. E-mail contact can be made through [jim.malone@inet.net.au](mailto:jim.malone@inet.net.au)

Jim Malone  
**Executive Chairman**

Denis Geldard  
**Executive Director-USA**

### **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. Mr. Geldard is a Member of the Australasian Institute of Mining and Metallurgy. The technical disclosure in this press release has been reviewed by David S. Boyer M.Sc., PG. Mr. Boyer a Licensed Geologist registered in the State of Washington. No.2400. and 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.*

### **FURTHER INFORMATION**

*For further information please contact;*

*Jim Malone: Executive Chairman on +61 4 19537714.*

*Media Enquiries: Fortbridge – Bill Kemmery on +61 2 9331 0655*

ABOUT MONARO MINING NL – “BUILDING A SERIOUS RESOURCE COMPANY”

Monaro Mining NL is an Australian-based international exploration and pre-development company focusing on uranium and gold. Its major assets include tenements in the USA. Monaro's objective is to be a producer in the medium term through the development of its advanced projects in the USA. Monaro shares are listed on the Australian Securities Exchange and the Frankfurt Stock Exchange and Monaro ADSs are eligible for OTC trading in

## CORPORATE INFORMATION

### Directors

Jim Malone	Executive Chairman
Denis Geldard	Executive Director
Greg Barns	Non-Executive Director
Michael Duncan	Non-Executive Director

### Registered Office

103 Abernethy Road,  
Belmont, WA, Australia, 6104

### Stock Exchange Listings

Monaro is listed on the Australian Securities Exchange (ASX Code: MRO) and the Frankfurt Stock Exchange (Xetra Code: M2H). Monaro shares are eligible for Over-The-Counter trading in the United States of America in the form of American Depositary Shares (ADS) under the symbol "MNOMY".

### Further Information on Monaro Mining NL

Visit: [www.monaromining.com.au](http://www.monaromining.com.au)  
Mail: PO Box 1788  
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Tel: +61 8 9277 9782  
Fax: +61 8 9277 6818

### Shareholder Enquiries

Registries Limited manages the share register for Monaro Mining. Queries regarding the number of shares held, change of address and other matters regarding your shareholding should be directed to:

Registries Limited  
Level 7, 207 Kent Street  
Sydney NSW 2000  
Tel: +61 2 9290 9600  
Fax: +61 2 9279 0664

### ADR Depositary Bank

JPMorgan Chase Bank N.A.  
Depositary Receipts Group  
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New York, NY 10004

Any enquiries regarding an individual ADR holding can be directed to JPMorgan Service Center:-

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Toll - free US & Canada 800-990-1135  
Outside the US 651-453-2128  
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Visit [www.adr.com](http://www.adr.com) and go to Shareholder Services

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