



## Quarterly Activities Report

### Period Ending 30 June 2009

#### Overview

#### Exploration

- Atom Energy Limited (ASX: AXY, 'Atom') continued assessment of the exploration potential of its wholly owned tenements in the Northern Territory through evaluation of the HyMap spectral scanning data collected in the extensive survey flown last year. The Company also undertook an extensive review of all other current and historical exploration information covering the Company's tenements in the Ngalia and Amadeus basins and has identified areas hosting potential for base metals, uranium and phosphate.
- The company entered into a joint venture agreement (JV) with Thundelarra Exploration Ltd (ASX Code: THX). Under the agreement THX will have the right to earn a 70% interest in the Cleo's Uranium Project tenements located in the Pine Creek area of the Northern Territory (approximately 175 kilometers southeast of Darwin). Formal JV documents were executed after the end of the quarter.

#### Corporate

- A non-renounceable rights issue was completed successfully raising \$1,358,547 before issue costs.
- A Term Sheet Agreement was signed to acquire up to 100% of the Kalgoorlie North Gold project from Kalgoorlie Mining Associates Pty Limited.
- After the end of the quarter David Steinepreis resigned as company secretary and Jay Stephenson was appointed.

Atom Energy is a mineral exploration company with a portfolio of exploration projects in the Northern Territory of Australia and interests in projects in the Four Corners district in south east Utah, USA.

The Company holds in excess of 10,000km<sup>2</sup> of wholly owned tenement in the Northern Territory and interests in 218 mineral lode claims in Utah.

The Company's Cleo's Uranium Project located 175km southeast of Darwin within the highly prospective Pine Creek Geosyncline hosts Inferred JORC compliant resources in the Twin and Dam areas containing 430 tonnes (960,000 lbs) of U<sub>3</sub>O<sub>8</sub>.

The Company's early stage projects in the Alice Springs and Tennant Creek areas of the Northern Territory cover extensive poorly explored areas with potential for palaeochannel and sediment hosted uranium mineralisation.

Atom, through its wholly owned subsidiary, Mustang Energy Ltd, holds interests in three prospective areas in Utah, USA which host known uranium mineralisation.

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## Northern Territory Projects

### CLEO'S URANIUM PROJECT

The Cleo's Uranium Project is located 175 kilometres southeast of Darwin and covers 452km<sup>2</sup> within the prospective Pine Creek Geosyncline. Situated between Kakadu and the Rum Jungle uranium field the project hosts uranium resources at the **Twin & Dam deposits** discovered in the mid 1980's by Total Mining Australia Pty Ltd.

Atom has entered into a joint venture agreement (JV) with ASX listed Thundelarra Exploration Ltd (ASX Code: **THX**). Under the agreement THX has the right to earn a 70% interest in the Cleo's Uranium Project tenements. Thundelarra has tenements contiguous with Atom's tenements and proposes to conduct an intensive regional exploration program over the Cleo's project area including geological mapping, airborne geophysics, ground radiometric surveying and drilling, commencing before the end of the current field season

Under the terms of the JV agreement:

1. THX will issue 1 million ordinary THX shares to Atom (escrowed for 6 months).
2. THX can spend \$300,000 within 3 years to earn a 70% interest in tenements EL24549, EL25477, EL25478 & EL25479 with THX required to spend a minimum of \$100,000 p.a. during the earn-in period. THX can withdraw after the first year.
3. After THX has earned its 70% interest in the tenements, Atom can elect to contribute its share of expenditure or convert to a 10% interest which is free-carried to a decision to mine. An industry-standard dilution formula applies.
4. If a decision is made to mine any part of the JORC compliant resource currently defined by Atom on EL24549, Thundelarra will pay Atom \$1,000,000 cash or issue Atom with Thundelarra ordinary shares valued at \$1,000,000.

Atom is pleased with the program proposed as part of THX's regional development strategy in the Pine Creek area and looks forward to the results of the exploration program.

### NATIVE GAP PROJECT

The Native Gap Project (EL24287) is located 120 kilometres north of Alice Springs and covers a portion of the eastern end of the Ngalia Basin.

In November 2007 Atom entered into an agreement with NuPower Resources Limited (ASX: NUP) to establish a farm-in and joint venture to advance the exploration of the Native Gap Project. Under the terms of the agreement, NuPower would spend a minimum of \$150,000 on an airborne electromagnetic (AEM) survey, water sampling and geological mapping within 12 months of the commencement of the Agreement and may earn 70% equity in the Native Gap project by sole expenditure of \$2 million within five years after commencement.

NuPower completed gravity and airborne electromagnetic (AEM) surveys over the tenement in 2008 identified two shallow palaeochannels under the eastern part of the license.

JV expenditure in the quarter ending 31 March 2009 was \$12,552.45. Total JV expenditure to 31 March 2009 was \$279,433.94. There was no further expenditure on the tenement in the June quarter.

### GAYLAD CREEK PROJECT

The Gaylad Creek Project (EL24249) consists of a granted exploration licence covering 291km<sup>2</sup> located 140 kilometres east-southeast of Alice Springs.

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Ground magnetics and electromagnetic surveys completed over reversely polarised targets have defined pyroxenite intrusives containing disseminate pyrite and pyrrhotite with potential to host nickel sulphide and copper-lead-zinc mineralisation on the intrusive margins.

Historic data for the project area has been compiled into a GIS database and field work to date has validated much of the previous exploration data. A comprehensive review of the historic and recent data is warranted to identify prospective stratigraphy and targets and is reliant on improved geological mapping which will be facilitated by interpretation of detail spectral scanning survey data.

### OTHER NORTHERN TERRITORY PROJECTS

In addition to the Cleo's, Native Gap and Gaylad Creek tenements, Atom Energy holds nine granted exploration licences and nine licence applications covering 12,160km<sup>2</sup> predominately in the Alice Springs and Tennant Creek district of the Northern Territory.

All these areas, Kurinelli (EL24604), Allambi (EL26347), Palmer River (EL25594) and Randall's Peak (EL25989), are early stage, conceptual exploration properties which have been covered by HyVista Corporation's HyMap hyperspectral imagery to facilitate geological mapping and target delineation.

The Company continues to review the exploration potential on all Northern Territory projects. Preliminary targets have been identified in several project areas as the Company broadens its commodity focus to include base and precious metals and phosphate as well as uranium.

Initial ground work and sampling in 2008 identified anomalous and high grade base metal, manganese and cobalt mineralisation within areas on several project tenements which warrant detailed mapping, structural interpretation and geochemical sampling. Recent work has focussed on the compilation of all geochemical sampling, geophysical data, mapping and historical drilling data into project data bases to assist with the interpretation and re-processing of the spectral scanning data acquired through the extensive survey conducted last year.

Planning and budgeting for field mapping and sampling programs is underway with field work to examine structural and geochemical targets scheduled to commence during the September quarter.

Atom continues to evaluate possible joint ventures on some of its existing properties and new project opportunities in the Northern Territory and elsewhere across a range of commodities.

### Utah Projects

The Company currently holds interests in three uranium exploration projects in south east Utah (USA). No work has been conducted on these properties during the quarter.

### The Kalgoorlie North Gold Project

The directors of Atom Energy Limited (**Atom**) have signed a terms sheet agreement to acquire, through its wholly owned subsidiary GPM Resources Pty Ltd (GPM), up to 100% of the interest held by Kalgoorlie Mining Associates Pty Ltd (**KMA**) in the Kalgoorlie North Gold Project located in the Bardoc Tectonic Zone, **45km north of Kalgoorlie** in Western Australia

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**HIGHLIGHTS:**

- Extensive package of 98 km<sup>2</sup> of granted mining and prospecting leases covering 25km of strike over the well mineralized Bardoc Tectonic Zone extending north from Broad Arrow.
- Historical gold mining centre with 220,000ozs past production.
- Centered in a major gold producing region with excellent infrastructure and proximity to existing processing facilities.
- Current JORC Inferred Resource of 4.56Mt @ 1.8 g/t for 267,000oz Au, with additional mineralisation identified in over 50 prospects and on depth extensions to existing resources.
- Potential for significant expansion of resources through evaluation of the existing exploration data base including 9,784 drill holes plus geochemical, geophysical and detailed geological data.

The directors believe that the Kalgoorlie North Gold Project provides an excellent opportunity to fast track resource expansion and mine development at current high gold prices and affords Atom real potential to progress to gold producer status with longevity of gold inventory.

**TRANSACTION SUMMARY**

Subject to satisfactory completion of due diligence (DD) to be completed on or before Monday 27<sup>th</sup> July 2009 or such other date as agreed between the parties, GPM will enter into a fuller form purchase agreement to acquire an initial 70% of KMA's interests in the Kalgoorlie North Gold Project with the option to acquire the remaining 30% of the project. The proposed consideration for the acquisition will be staged in tranches as follows:

**STAGE ONE CONSIDERATION**

Stage One Consideration is made up of cash and shares to the value of \$2 million to be paid as follows:

- A cash payment of \$1,000,000 of which \$400,000 was paid on executing the terms sheet agreement and will be repaid if the DD condition is not satisfied with the remaining \$600,000 to be paid within 5 days of satisfactory DD; and
- \$1,000,000 worth of shares in GPM, issued pursuant to satisfactory completion of DD, at a deemed issue price of 20 cents per share.

In respect of the GPM shares to be issued; Atom will guarantee that in the event that GPM shares do not become tradeable on the ASX within 12 months of the completion of DD then KMA will receive such shares in Atom, equal to a value of \$1m, based on the VWAP of Atom shares traded on the ASX in the 5 days prior to the date which is 12 months after the successful completion of DD (the "Shares Guarantee"). Shares to be issued in stages 2 and 3 below will also be subject to the Shares Guarantee based on the VWAP as above.

**STAGE TWO CONSIDERATION**

The project vendors will receive further cash and shares based on milestones being achieved as follows:

- **Achievement of 500,000 ounces JORC Inferred Resources of Au:** A cash payment of \$500,000 and the issue of \$700,000 worth of GPM shares at a deemed issue price of 20 cents per share;
- **Achievement of 1 million ounces JORC Inferred Resources of Au:** A cash payment of \$250,000 and the issue of \$500,000 worth of GPM shares at a deemed issue price of 20 cents per share; and
- **On Completion of a BFS / Commencement of Production:** The issue of \$1 million worth of GPM shares at a deemed issue price of 20 cents per share.

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## STAGE THREE CONSIDERATION

GPM can acquire the remaining 30% of the Kalgoorlie North project for a fixed price of \$5,000,000 to satisfied by the issue of 12,500,000 GPM shares at a deemed issue price of 40 cents per share.

## Corporate Activity

### NON-RENOUNCABLE RIGHTS ISSUE

The Company completed a rights issue during the quarter issuing 90,569,821 new shares at 1.5 cents to raise \$1,358,547 before costs. The funds raised will be applied to support the continued exploration of the Company's projects in the Northern Territory (in particular Gaylad Creek, Allambie, Randall's Peak and Kurinelli), expenses of the offer, general working capital and will also enable the Company to take advantage of potential new project acquisition opportunities.

*Information in this document that relates to Mineral Resources and exploration results is based on information compiled by Mr David Hamlyn of Resourserve Pty Ltd (ACN 131 161 414) which provides geological consulting services to Atom Energy Limited. Mr Hamlyn is a Member of The Australasian Institute of Mining and Metallurgy and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Hamlyn consents to the inclusion in the document of the information in the form and context in which it appears.*

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