

16 October 2012

ASX Market Announcements Australian Securities Exchange 20 Bridge Street SYDNEY NSW 2000 By Electronic Lodgement

Dear Sir/Madam

# QUARTERLY ACTIVITIES REPORT FOR PERIOD ENDING – 30 September 2012

## **HIGHLIGHTS**

- Continued solid production at both the Langer Heinrich and Kayelekera mines for the September quarter.
  - combined production of 1.929Mlb (877t) U<sub>3</sub>O<sub>8</sub>, a decrease of 5.8% from last quarter but in line with expectations considering a 16 day planned annual maintenance shutdown at Kayelekera.
  - production averaged in excess of 97% of nameplate when excluding the Kayelekera plant shutdown period.
- Langer Heinrich production 1,290,462lb (587t)  $U_3O_8$  99.2% of Stage 3 nameplate but importantly at feed grades of 754ppm  $U_3O_8$  5.8% below design of 800ppm and 10.2% below last quarter feed grade of 840ppm.
  - record recovery of 86.8%.
  - demonstrated the ability of the project to produce at nameplate with feed grades well below design.
- Kayelekera production 638,950lb (290t) U<sub>3</sub>O<sub>8</sub> down on last quarter but in line with expectation considering the successful shutdown which reduced plant availability for the quarter by 18%.
  - on an available operating day basis the plant achieved 94% of nameplate.
  - production reduced by approximately 135,000lb U<sub>3</sub>O<sub>8</sub> as a result of the planned annual maintenance shutdown.
  - acid plant production substantially increased as a result of upgrades during the shutdown with positive cost implications.
  - the likelihood of cheaper grid power delivered to site within 12 months has increased substantially.
- Sales for quarter of 1,224,477lb U<sub>3</sub>O<sub>8</sub> generated revenue of US\$61M representing an average sale price of US\$49.83 with December quarter sales expected to be greater than 2Mlb.
- The utilisation of two new treatment processes at Langer Heinrich and Kayelekera, which are now technically de-risked, open doors for substantial early gains in production optimisation and cost efficiency.
- US\$50M payment received on schedule from the US\$200M prepayment provision available from the recent Long Term Contract.

## **SAFETY**

The Company continued its high safety performance with a 12-month moving average Lost Time Injury Frequency Rate (LTIFR) of 1.0. During the period, one lost time injury (LTI) was recorded at the Langer Heinrich Mine (LHM) involving a mine contractor assistant who damaged the tip of one thumb. Corrective actions were implemented to prevent a recurrence of the incident. High profile safety management initiatives, as part of a comprehensive Safety Action Plan, have been implemented at LHM. In addition, a new behavioural programme is being implemented across the whole LHM operation. There were no LTIs at Kayelekera Mine (KM).

#### **QUARTERLY URANIUM SALES**

Sales for the quarter were 1,224,477lb  $U_3O_8$  generating revenue of US\$61M, representing an average sales price of US\$49.83/lb  $U_3O_8$  (average Ux spot price for the quarter was US\$48.95/lb  $U_3O_8$ ). Sales volume was below equivalent production for the quarter due to a stock build in preparation for contracted sales in excess of 2Mlb  $U_3O_8$  in the December quarter.

The uranium inventory is now at desired levels to maintain the supply chain for a combined production of 8.5Mlb pa.

#### LANGER HEINRICH MINE, Namibia

## **Production by quarter**

LHM	Dec 2011 Qtr	Mar 2012 Qtr	Jun 2012 Qtr	Sep 2012 Qtr
U <sub>3</sub> O <sub>8</sub> Production (lb)	1,192,785	1,052,364	1,322,480	1,290,462

During the quarter the plant continued to operate in line with Stage 3 production parameters achieving 99.2% of nameplate production. Plant throughput continued to increase and that allowed the average ore feed grade to be reduced to 754ppm, 6% below the design grade of 800ppm.

Production totalled 1,290,462lb  $U_3O_8$ , 2% lower than the previous quarter. The operation is consistently achieving Stage 3 design performance.

# Mining

The overall mined quantities decreased slightly over the quarter as planned maintenance was undertaken on two of the three primary excavators. The impact was that waste mining was restricted, which is reflected in the lower than planned stripping ratio. Ore mining was not affected as excavators were relocated as required.

	Jun 2012 Qtr	Sep 2012 Qtr
Ore mined (t)	1,104,028	1,556,040
Grade (ppm)	605	652
Additional low grade ore mined (t)	1,182,368	1,341,345
Grade (ppm)	318	321
Waste/ore ratio	2.69	1.72

All mining is now in Pit C, with backfilling operations occurring in all other pits, some for the construction of future tailings storage facilities and Pit D for rehabilitation.

ROM ore stocks have been maintained at around 4 weeks' supply that have been supplemented by medium and lower grade ores in line with the crusher blend requirements.

## **Process Plant**

The increased plant throughput continued in the September guarter as reflected below:

	Jun 2012	Sep 2012
	Quarter	Quarter
Ore milled (t)	838,988	896,355
Grade (ppm)	840	754
Scrub efficiency (%)	92.0	92.0
Leach extraction (%)	91.2	93.4
Wash efficiency (%)	86.1	86.9
Overall recovery (%)	85.2	86.8

Ore feed tonnage through the process plant increased by 7% with total throughput of 896,355t.

The front-end circuit continued to perform well, again achieving record throughput. The scrub efficiency has remained unchanged at 92% (against a design efficiency of 93%). As reported previously, optimisation work in the screening area is ongoing in order to improve performance. Although the crushing and scrubbing part of the circuit has excess capacity, the classification section is the focal area of the optimisation efforts.

The extraction in the leaching circuit improved due to the ongoing success with the new Flash/Splash heat exchanger and direct steam injection into both leach circuits. Further improvements in this area are expected during the December quarter.

Although the efficiencies in the Counter-Current Decantation (CCD) circuit improved to new record levels, this area of the plant has the opportunity for further improvements. Additional modifications are being implemented and should lead to continuous improvements for the remainder of the financial year.

The modifications on one of the NimCix circuits have been completed successfully and yielded the expected improved performance. Modifications to the second circuit are underway and will be completed during the December quarter.

The overall plant efficiency increased to 86.8% against a design recovery rate of 85%. The most significant contributor to this new record overall recovery rate has been the improvement in the leach recoveries, whilst recoveries in other areas remained consistent or slightly improved.

The previously reported review of future tailings deposition has resulted in further construction work on TSF2 and commissioning the detailed designs for TSF3 – the first full in-pit tailings deposition area. The detailed designs will be completed during the December quarter and construction work will also commence during this period. Tailings deposition is envisaged to change from TSF2 to TSF3 during the first half of CY2013.

#### **KAYELEKERA MINE, Malawi**

## Production by quarter

KM	Dec 2011 Qtr	Marc 2012 Qtr	Jun 2012 Qtr	Sept 12 Qtr
U <sub>3</sub> O <sub>8</sub> Production (lb)	631,780	724,552	726,299	638,950

Production during the September quarter decreased as a direct result of the planned major shutdown during August. This resulted in reduced production of approximately 135,000lb and it is expected that some of this loss will be made up during the remainder of the financial year through process optimisation.

## Mining

## Mining data

	Jun 2012 Qtr	Sept Qtr
Ore mined (t)	563,521	193,953
Grade (ppm) U <sub>3</sub> O <sub>8</sub>	1,501	1,065
Additional low grade ore mined (t)	159,654	145,328
Grade (ppm)	534	523
Waste/ore ratio	1.22	3.93

Total material mined for the quarter was 4% above budget. Ore mined was 17% below due to a change in mine sequencing which targeted clearing some minor pit failures. The additional waste mined resulted in a strip ratio of 3.93 compared to the forecast of 2.88.

Despite low mining production during this quarter, ore availability on stockpiles (ROM pad) was in excess of three months of plant requirements.

In line with wet weather strategies, ore mining to ROM stockpiles will be increased in the next quarter to mitigate the risk of crusher feed delays due to inclement weather in the November to March wet season.

#### **Process Plant**

## Operating data

	Jun 2012 Qtr	Sept 2012 Qtr
Operating time (hrs)	1,842	1,708
Mill feed(t)	347,265	323,409
Grade (ppm) U <sub>3</sub> O <sub>8</sub>	1,247	1,111
Leach extraction (%)	88.3	86.9
RIP efficiency (%)	92.6	93.6
Overall efficiency (%)	83.0	81.4

Operating time was directly affected by the planned shutdown during August.

Leach recovery decreased to below 90% due to the ore feed blend however acid consumption was decreased.

Resin-in-Pulp (RIP) and elution operational issues continue to focus primarily on resin management and corrosion mitigation. Resin deliveries were delayed by the supplier and third parties causing lower resin volumes in circuit and subsequently lower RIP efficiency in July but this was rectified in August and September. Refurbishment projects focused on corrosion mitigation in these circuits are progressing well.

Overall recovery decreased from the previous quarter as a result of the lower leach recovery even though a higher RIP efficiency was achieved.

Record production of 275,400lb was achieved in July equating to 100% of nameplate and 255,000lb in September equating to 93% of nameplate.

## **Cost Optimisation**

Cost optimisation is continuing, focusing on savings on commercial grid power, acid, reagents, diesel and transport. The potential for connection to grid power in Malawi continues to look possible and reduction of acid imports remains the highest priority for cost management. A number of meetings have been held with ESCOM, the local grid power provider, and Paladin believes that an economic arrangement for delivery of grid power is possible within the next 12 months and once connected should reduce C1 costs by 10%. In addition, the restart of the acid plant at the conclusion of the plant shutdown in August has yielded improved production levels as anticipated, yielding additional production of 30tpd of acid, reducing imports by 1 truck per day (900tpm). New technology and blend management are also a priority and will be instrumental in further reducing costs in the near term. Thus far the combination of blend management and improved acid production rates have brought KM to the cusp of self-sufficiency in terms of acid requirements.

# **Near-mine Exploration**

Exploration drilling started late in the quarter in the Mpata lease/target, 15km south east of the minesite, with four drill holes totalling 645m completed. Two holes intercepted sub-economic uranium mineralisation. Drilling is continuing at Mpata and will move to Nthalire, 30km south of the minesite in November.

## PRODUCTION OPTIMISATION - REASONS FOR EXPECTING EARLY GAINS

Following both operations reaching nameplate performance the sites are now entering a period of optimisation, which will lead to improved process recoveries and reduced unit operating costs. Some elements of this work have potential to expand the reserve base for both projects by being able to use lower ROM feed grades.

At both KM and LHM, Paladin has pioneered the use of new process routes for uranium recovery. These routes have been considered technically viable for some time but there have been no commercial scale operations using either the alkaline leach process for calcrete ores or the modern deployment of Resin-in-Pulp (RIP) for conventional mining operations until Paladin utilised the technologies.

The successful use of new technology is generally characterised by three phases: an initial **primary phase**, where the technology is first implemented, and which has a high failure rate (this is the critical phase that Paladin has now successfully transitioned on both sites); a **secondary development phase** during which rapid advancement is made in the state of the art, significant bottom line improvements result from optimisation processes (the phase in which the Company is currently engaging) and the technology gains general acceptance; and a **tertiary phase** which sees the rate of optimisation slow appreciably and the process is broadly applied as a preferred model.

There are many parallels to the implementation of the alkaline leach route for a conventional calcrete uranium mine (LHM) and the first use modern use of RIP (KM) within the history of mineral processing. The development of flotation for sulphide minerals and the CIP route for gold recovery are just two, but the history of the development of these two processes and many others followed the three phases described above with appreciable cost and recovery benefits achieved during this secondary phase.

Both LHM and KM have now stabilised production at nameplate levels, with LHM established as a second quartile cost producer and KM on the verge of achieving this. Consequently, the technologies associated with these operations can now be seen to be entering the secondary phase of cost optimisation through development and adaptation. During the LHM Stage 4 feasibility study, Paladin has been developing a number of process optimisation processes, some of which have been piloted. These can now be implemented or further developed over the next months and years, with an expectation of further significant improvements in the bottom line performance of the operations.

The first of these improvements have already been implemented. At LHM, the Flash/Splash was incorporated into the Stage 3 upgrade resulting in a substantial reduction in operating cost and increase in reliability compared with the initial spiral heat exchangers. At KM, the Concentrated Eluate Neutralisation circuit has been replaced with a new improved design, resulting in better efficiencies, reduced costs and improved product

quality, the benefits which are expected to flow through the operation and be reflected in the December quarter results.

Just as the backbone of Paladin has been its project pipeline, it now has a process optimisation pipeline available to exploit. This pipeline consists of optimisation targets at various stages of development and in the near-term, will see the introduction of teeter separation techniques to improve scrubbing efficiency at LHM and nano-filtration applied at KM to significantly reduce reagent consumption rates. Behind these two optimisation strategies there are a number of other advanced optimisation opportunities that are being developed by the Company.

The impact of teeter technology at LHM is expected to be a significant cost saver and the impact of nano-filtration at KM should be similarly beneficial. At this stage the teeter installation is expected to commence commissioning in the June quarter 2013 and the nano-filtration in the September quarter 2013. Clarification of costs and implementation will be provided in this year's December quarterly report.

#### **AURORA - MICHELIN URANIUM PROJECT, Canada**

Drilling started at Michelin in late August. Two diamond core rigs are now operating on site and have completed 19 diamond holes incorporating 3,200m of core.

Initial infill drilling at Michelin intersected uranium mineralisation as expected. Detailed widths and grades will be reported after assays have been received and downhole gramma logs validated.

Ground geophysical surveys, geological mapping and prospecting were undertaken along the Michelin trend east and west of the main mineralised zone as well as the sub-parallel Rainbow trend, to the south and west all within 5km of the Michelin deposit. Early results show numerous uranium anomalies along this trend offering targets for future scout drilling. At this stage four scout drill holes have been completed at Running Rabbit Lake. All holes intersected some uranium mineralisation. Detailed results are still outstanding.

An updated mineral resource estimate for the Michelin deposit is expected early in 2013 after all assays have been received and validated.

# **MANYINGEE PROJECT, Australia**

Currently one rotary mud and one diamond core rig are operating on site. By the end of September a total of 59 holes for 6,328m of rotary mud, and 148.8m of diamond core had been completed.

So far the drilling has confirmed the previously identified mineralisation. Uranium mineralisation is being identified by traditional gamma logging (Paladin in-house equipment) and direct uranium reading Prompt Fission Neutron (PFN) logging (by contractor GAA Wireline). Detailed grades and widths of mineralisation will be estimated using a combination of PFN logging and assay results.

Drilling progress is as planned and is anticipated to be completed in early November. The final phase of drilling will concentrate on establishing water bores for testing the hydrological and geochemical properties of the mineralised aquifer and to acquire baseline data for the permitting of a Field Leach Trial (FLT). After the completion and verification of all data and assays are received, an updated mineral resource estimate is expected in the March quarter of 2013.

#### CORPORATE

## Long Term Off-take Contract (LTC) with a US\$200M Prepayment and US\$50M payment received

Paladin advised in August that it signed a milestone 6 year off-take agreement with a major utility to deliver a total of 13.73Mlb  $U_3O_8$  in the period from 2019 to 2024 incorporating a prepayment of US\$200M as its key feature. Delivery will be from its current African mining operations or a project yet to be developed from the

Company's significant existing project pipeline or a combination of these options. Uranium delivered under the LTC will be sold at market prices prevailing at the time of delivery bounded by escalating floor and ceiling prices.

The prepayment of US\$200M will be made to Paladin, in respect of part of the future product deliveries. To secure Paladin's obligation to deliver product representing the prepayment amount, the utility will hold security over 60.1% of Paladin's Michelin project in Canada. The percentage of Michelin secured will be reduced by joint agreement as the value of that project is enhanced by Paladin's ongoing work. The Michelin security can also be replaced by other appropriate security if required.

In October Paladin announced that in accordance with the payment schedule agreed with the utility involved, the first tranche of US\$50M was received on 28 September. The remaining amount of US\$150M is scheduled to be received in a second and final tranche by 31 January 2013.

The prepayment will be applied to repayment of the balance of the March 2013 convertible notes (US\$134M) with the remainder retained for balance sheet strength as working capital.

The specific nature of the LTC, leveraging off forward production, is in itself a strong indication of the uranium industry's future supply challenges and fully endorses Paladin's development vision to date.

The Company is now re-evaluating its strategic options in the light of this major achievement.

#### Mid-term Sales Contracts Secured

In late August Paladin advised it had secured two mid-term off-take agreements for U<sub>3</sub>O<sub>8</sub> production originating from its mining operations at LHM and KM.

These agreements are for the purchase of a total of  $6.3Mlb\ U_3O_8$  to be delivered from late 2012 to end 2015 at approximately 2Mlb pa. Pricing will be determined predominately by the market price at the time of delivery (without floor or ceiling limitations) while a minority portion of the delivery prices will be in accordance with a series of specified fixed prices which exceed current spot uranium prices.

# 2012 Supply/Demand Analysis (2nd Edition)

Paladin is finalising a comprehensive update to its uranium supply, demand and price study, first presented in 2011. Market demand has been estimated on a reactor-by-reactor basis. On the supply side, Paladin has applied its in-depth technical and operational expertise (particularly that of bringing new uranium operations into production) to analyse and characterise, from both a risk and cost point of view, all known and available uranium deposits including estimating their potential to contribute to primary supply. Secondary sources of uranium supply have also been considered.

Preliminary results show that the effects of Fukushima have had a disproportionately greater negative impact on primary uranium supply relative to uranium demand. While Paladin's analysis suggests that annual demand by 2020 is only 8% lower than pre-Fukushima scenarios, low uranium prices and a difficult financing environment have generally stifled and delayed the development of new uranium projects, making what was already a precarious situation worse. As a result, primary supply is estimated to be up to 25% lower in 2020 than would have otherwise been expected if the pre-Fukushima uranium price trend had been maintained. In summary, this market analysis confirms a supply industry in crisis in which production is unable to meet emerging requirements in the short to medium term. The supply crunch is spurred by a confluence of factors detailed in the study, including the aging of historical mines, the end of the US-Russia HEU agreement, a limited number of new feasible mining projects, lack of economic incentives to invest in new mines and higher mining and development costs confronting the industry. The results of the Paladin supply, demand and price analysis will be published and communicated over the next quarter.

## **URANIUM MARKET COMMENTS**

The Ux spot price weakened during the quarter moving from \$50.75/lb  $U_3O_8$  in July to \$46.50/lb  $U_3O_8$  in September. The Ux term price also fell from US\$61.50/lb  $U_3O_8$  to US\$60.00/lb  $U_3O_8$ .

#### Outlook

The global uranium market continues to be negatively affected by the restart schedule for Japanese reactors. While two reactors were allowed to restart in July 2012, there remain a total of 48 reactors idle awaiting Government approval to recommence operations. These off-line Japanese plants constitute less than 7% of 2012 world annual uranium requirements and the global commitment to nuclear power remains resolute.

In mid-September, the Japanese Cabinet approved a new energy plan which included reducing that nation's reliance on nuclear energy by the years 2030/40. However, subsequent to that announcement, the Government appeared to waiver from that target date recognising the complexities involved in reducing Japan's long-standing commitment to nuclear power. This move by the Japanese Government has now ensured the perceived inventory overhang has disappeared as the Japanese utilities will want to keep these uranium stocks to ensure future fuel security.

The newly-formed Nuclear Regulation Authority has indicated it expects to draft new safety requirements early in the new calendar year which are a precursor to additional reactor restarts. The lack of nuclear electricity has imposed significant strain on the Japanese power utilities which reported financial losses totalling US\$4.5 billion post-Fukushima and there is growing concern in the Japanese business community regarding the economic impact of higher electricity prices.

The Japan Electric Power Development Corporation (J-Power) announced plans to reinitiate construction of its 1400Mwe Ohma reactor (Aomori Prefecture) which was 40% complete at the time of the Fukushima earthquake and tsunami.

Yours faithfully Paladin Energy Ltd

JOHN BORSHOFF
Managing Director/CEO

# **Declaration**

The information in this Announcement relating to exploration and mineral resources is, except where stated, based on information compiled by David Princep B.Sc who is a Fellow of the AusIMM. Mr Princep has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity that 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", and as a Qualified Person as defined in NI 43-101. Mr Princep is a full-time employee of Paladin Energy Ltd and consents to the inclusion of this information in the form and context in which it appears