



# QUARTERLY ACTIVITIES REPORT

*for the period ended 30 June 2012*

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## HIGHLIGHTS

- High-grade surface samples up to 13,912 ppm  $U_3O_8$  from Mile 72.
- New areas of high grade uranium extend Kudu-Impala to the south and west.
- Kudu-Impala now has a length and width of over 10km by 2km.
- RC drilling at Mile 72 has confirmed uranium mineralisation within the basement alaskite, granites and schists.
- Metals has entered a new phase of exploration at Mile 72, focusing exclusively on delineating granite-hosted primary uranium mineralisation
  - Deeper drilling planned to test for Rössing-style primary uranium mineralisation.
- Geophysical targets confirmed at Manindi Zinc Project have potential to substantially expand the resource.
- High quality data from regional aeromagnetic surveys of western Victorian gold projects received.



## URANIUM PROJECTS, NAMIBIA

During the June 2012 quarter, very positive results were returned in the final batch of 154 assays received from the trench sampling at the Mile 72 Project in Namibia (Figure 1). Assays were also received from the pilot shallow RC drilling programme of 231 drillholes for 1,023m at Mile 72 which showed strong anomalism away from the main Kudu-Impala prospect.

At the Engo Valley Project (Figure 1) the environmental clearance and access permit for surface exploration work which were submitted in January 2012 are still awaited.

### THE MILE 72 URANIUM PROJECT

The Mile 72 Uranium Project is a large uranium project on the coast of Namibia north of the city of Swakopmund. Some of the highest uranium grades in the world have been recorded in outcrop and in shallow pits at Mile 72. Metals Australia has entered into a new phase of exploration, targeting a large high-tonnage moderate grade primary deposit of a similar style to the Rössing and Husab mines to the south.

#### Surface trenching

New surface sampling results received during the quarter from the Kudu-Impala area (Figure 2, Table 1) have again highlighted the high grade values achieved over significant intervals at Mile 72. Grades were as high as **13,912 ppm  $U_3O_8$** , and intervals of up to nearly **300 m in length with in excess of 900 ppm  $U_3O_8$**  have been identified. Most importantly, many of these high-grade results are located outside the previously defined extent of the Kudu-Impala prospect area.

All of the high-grade zones are in areas of outcropping or subcropping schists, granites and alaskite, and in some cases in areas of basaltic cover. The mineralisation occurs as carnotite within gypcrete, as it is at all other localities of high grade mineralisation at Mile 72.

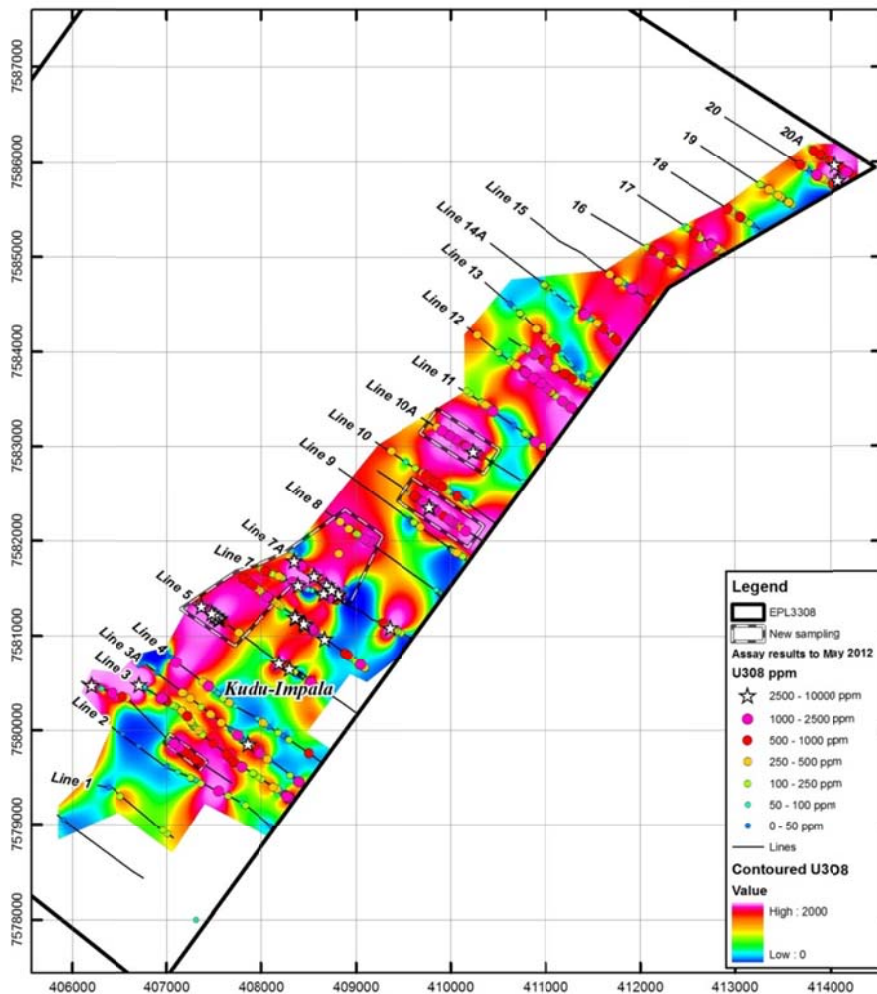
Assay results received during the quarter included 23 samples (out of 154) that exceeded 1,000 ppm  $U_3O_8$  (Table 1). These samples have allowed the definition of several new high-grade zones that substantially extend Kudu-Impala (Figure 3). One example of a new high grade zone includes the northwest extension of Line 5 which recorded an average of 947.1 ppm  $U_3O_8$  from 71 samples over 300 m of length on Line 5 (this result is not quoted as an intercept as sampling was taken from individual pits rather than as a continuous sample).



Figure 1 – Location of the Mile 72 uranium project, Namibia.



Figure 2 – Hand-dug sampling of subcropping weathered rocks in the NE Extension area.



**Figure 3** – Uranium distributions determined by Metals Australia throughout the Mile 72 licence area. Assay results are plotted over a contoured plot of  $U_3O_8$  distributions. New work reported here incorporates sampling along lines 2A through 10A (outlined by stippled lines). Total strike length of uranium anomalism now exceeds 10km and width is over 2km in places.

**Table 1 - Highlights of last 154 assay results from sampling at Mile 72 (samples exceeding 1,000 ppm  $U_3O_8$ )**

Line No	Sample No	$U_3O_8$ (ppm)	Easting	Northing	Line No	Sample No	$U_3O_8$ (ppm)	Easting	Northing
6	X1540	1651	408071	7581416		X1604	1957	407485	7581243
5	X1573	<b>2511</b>	407562	7581185		X1606	<b>2452</b>	407482	7581246
	X1575	1639	407555	7581191		X1607	<b>2665</b>	407479	7581248
	X1576	<b>2865</b>	407549	7581196		X1608	1262	407478	7581249
	X1579	1262	407542	7581202		X1615	1127	407466	7581259
	X1580	1698	407540	7581203		X1617	1071	407459	7581262
	X1582	<b>13912</b>	407534	7581208		X1631	1486	407380	7581313
	X1586	<b>2877</b>	407527	7581215		X1635	1627	407370	7581320
	X1588	1710	407523	7581218		X1636	<b>2653</b>	407369	7581321
	X1590	1117	407518	7581220	2A	X1672	1320	407136	7579821
	X1595	<b>2782</b>	407510	7581226		X1684	1556	407080	7579862
	X1599	1081	407499	7581234					

### Pilot shallow RC drilling programme

A short pilot programme of shallow RC drilling was completed at Mile 72, late in the March quarter. The programme was designed to test for shallow secondary calcrete-hosted uranium mineralisation within channels; that is, mineralisation of a similar style to Langer-Heinrich in Namibia and Yeelirrie in Western Australia. The programme is part of the systematic approach being taken by the Company to thoroughly explore all possible styles of uranium mineralisation at Mile 72.

Although some very encouraging results were received (Table 2), it is clear, in the areas tested, that there is no significant calcrete-hosted deposit present in the shallow subsurface. The presence of uranium mineralisation within the bottom-of-hole samples suggests that there is ample opportunity for deeper Rössing-style mineralisation in the drilled areas.

The gravel areas targeted by the drilling were immediately adjacent to areas of known subcropping uranium anomalism. All holes were able to penetrate the gravels, which vary from 0-5m thick (Figure 8).

Anomalous uranium mineralisation occurs in the base-of-hole sampling in several locations. These encouraging results confirm uranium mineralisation in the underlying basement rocks which are mostly alaskite, granite and biotite schist.

Assay results from the drilling were received in May 2012 and seventeen (17) of these samples exceeded 100 ppm  $U_3O_8$  (Table 2). Despite the wide spacing of the lines, there are distinct north-easterly correlations of bottom-of-hole results between lines. These correlations directly follow the north-easterly strike of the schists, granites and alaskite throughout the Project area.

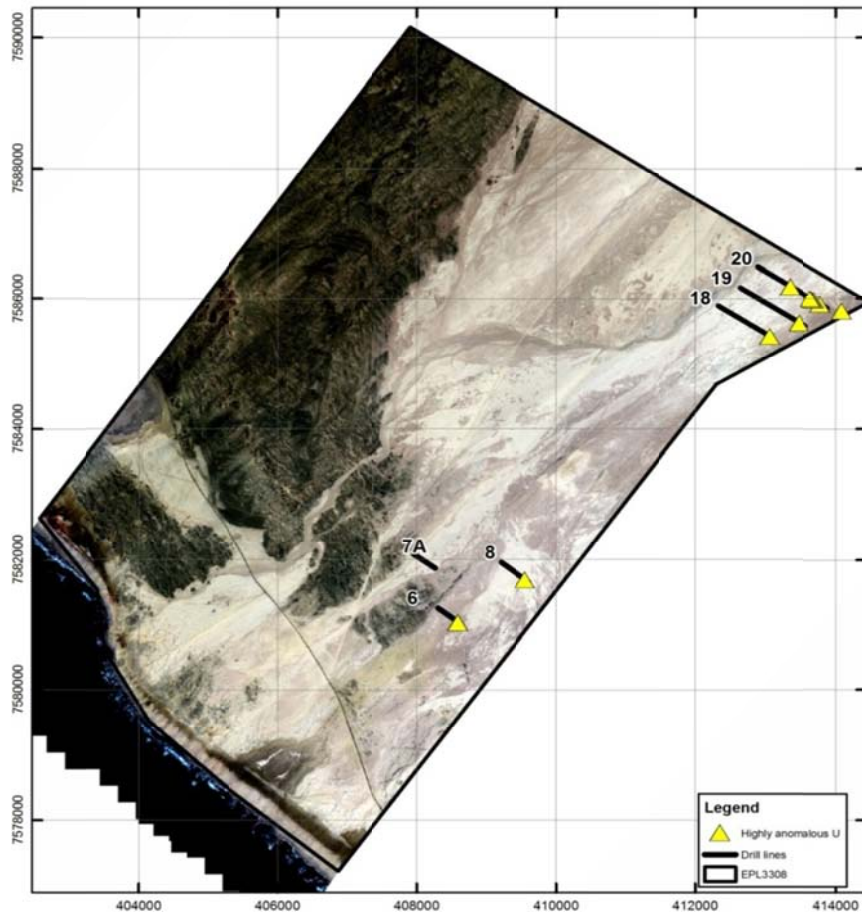
### A new phase of exploration at Mile 72

The elimination of Langer Heinrich-style calcrete-hosted mineralisation from the present list of targets at Kudu-Impala means that Metals has moved into a new phase of exploration at Mile 72. The clear target is now primary uranium mineralisation within the granite-schist-alaskite basement sequence. Primary mineralisation within the licence area is most likely to be of a similar style to the Rössing and Husab deposits.

Granite-hosted primary uranium deposits are typically high tonnage and moderate grade (250-600 ppm or 0.25-0.6 kg/t  $U_3O_8$ ). As such, the grades encountered at surface at Mile 72 are not expected to be encountered at depth but are, rather, a surface enrichment feature indicative of mineralisation at depth.

**Table 2 - Highlights of RC Drill hole assays  
(samples exceeding 100 ppm  $U_3O_8$ )**

<i>Hole No.</i>	<i>From (m)</i>	<i>To (m)</i>	<i><math>U_3O_8</math> (ppm)</i>
M72RC0167	3	4	324.2
M72RC0213	2	3	317.2
M72RC0054	1	2	316.0
M72RC0067	2	3	292.4
M72RC0162	3	4	241.7
M72RC0046	2	3	221.7
M72RC0213	0	1	220.5
M72RC0047	3	4	214.6
M72RC0061	0	1	187.5
M72RC0067	3	4	187.5
M72RC0077	2	3	158.0
M72RC0029	0	1	141.5
M72RC0049	2	3	134.4
M72RC0087	3	4	113.2
M72RC0049	1	2	108.5
M72RC0144	2	3	107.3
M72RC0054	2	3	104.3



**Figure 7** – Satellite image of the Mile 72 licence area, showing the recent RC drill fences. At Kudu-Impala, NE Extension, and Central Areas, “weathered rock” areas have been trench sampled and an initial 231 drillhole programme has been completed in the “gravel” areas in the current programme.

Metals is presently reviewing in detail all historic and recent data collected at and around Mile 72. Some of the key findings to date include:

- A regional geological assessment shows that the Mile 72 area has an equivalent propensity to generate alaskites (the hosts to uranium mineralisation) as the Alaskite Alley area that contains Rössing and Husab.
- Interpretation of the Kudu-Impala geology from geophysics shows that unique geological features, which may be important in the concentration of uranium mineralisation, do not extend far beyond the EPL3308 licence boundary.
- Uranium that is concentrated at surface at Kudu-Impala must be sourced from the basement sequence within the licence area, and has not been transported in from elsewhere.
- Groundwaters may have shifted the surface uranium anomalies relative to subsurface mineralisation to a limited extent.



- For a mineralised profile in this type of weathering environment, we will expect to see very high grades at surface, followed by a zone of depletion (maybe 20-50 m depth) that contains very little or no mineralisation, followed by fresh primary mineralisation.
- Several targets have been identified that require further refining and analysis prior to drilling and we expect to identify several more as work progresses.

Metals will continue to assess and investigate the Mile 72 licence using all methods necessary. Preparation is presently underway for a high-resolution aeromagnetic survey which is scheduled to be undertaken in the coming quarter. This will be used to refine targeting in identified drill target areas. The forthcoming drilling programme will comprise an array of deep (around 80-100 m), widely spaced holes over the chosen target areas. This first pass drilling programme will serve as a precursor to subsequent more substantial resource definition programmes.

### THE ENGO VALLEY URANIUM PROJECT

The Engo Valley project (EPL3306) is located in the remote northwest of Namibia in the Skeleton Coast (National) Park. Access Permits are required to visit the Skeleton Coast Park and there are no roads and no habitable sites within the 16,000 km<sup>2</sup> park.

In January 2012, Metals submitted a detailed Environmental Overview and Environmental Management Plan document to the Namibian Ministry of Environment and Tourism (MET) to apply for an Environmental Clearance and Access Permit to commence surface exploration work at Engo Valley. Unfortunately, the quarter passed without receiving the necessary permits from the MET on the granting of the clearance. Metals is continuing to liaise with the MET and is making every endeavour to ensure the early granting of the Environmental Clearance and Access Permit for Engo Valley. Once granted, a programme of field work to map, sample and assess the Engo Valley Project area has been planned and is ready to commence at short notice.

### BASE METAL PROJECTS, WESTERN AUSTRALIA

Metals currently holds an interest in two base metals projects in Western Australia (Figure 3).

The Manindi zinc project is located around 500 km northeast of Perth and is being explored by Metals with a view to expanding the existing resources and examining the project's copper potential.

The Sherlock Bay base metal joint venture project is located in the Pilbara region and is being managed and explored by Australasian Resources Ltd (ARH). The project surrounds ARH's Sherlock Bay nickel deposit.

### MANINDI ZINC PROJECT

During the quarter, a series of Fixed-Loop Time-domain ElectroMagnetic (FLTEM) geophysical surveys were performed at Manindi. These



Figure 3 – Location of the Western Australian base metals projects.

surveys were designed to validate and expand upon the anomalies detected during a Versatile Time-domain ElectroMagnetic (VTEM) geophysical survey over the entire group of tenements that was performed in the previous quarter.

The FLTEM surveys confirmed each of the VTEM anomalies, providing a number of drill targets at Manindi. These targets have the potential to significantly upgrade the resource at Manindi and have been ranked for future drill testing

The Manindi zinc project is a significant resource located in the Murchison District of Western Australia, 20 km southwest of the defunct Youanmi gold mine.

The deposit is a volcanogenic massive sulphide zinc deposit, comprising a series of lenses of mineralisation that have been folded, sheared, faulted, and possibly intruded by later dolerites and gabbros. The style of mineralisation is similar to other base metal sulphide deposits in the Yilgarn Craton, particularly Golden Grove to the west of Manindi at Yalgoo, and Teutonic Bore-Jaguar in the Eastern Goldfields.

Metals has previously delineated a JORC resource of:

**1.354 million tonnes @ 6.04% Zinc, 0.25% Copper, 3.4 g/t Silver & 0.25 g/t Gold**

The resource is divided into the following categories (at a 1% Zinc cut-off):

<b>Measured</b>	<b>497,000 tonnes @ 7.32% Zinc</b>
<b>Indicated</b>	<b>438,000 tonnes @ 6.38% Zinc</b>
<b>Inferred</b>	<b>419,000 tonnes @ 4.14% Zinc</b>

## **SHERLOCK BAY EXTENDED BASE METAL PROJECT**

The Sherlock Bay Extended project is composed of two Exploration Licences (E47/1769 and E47/1770), which surround the main Sherlock Bay nickel deposit (wholly owned by Australasian Resources Ltd - 'ARH'). The project is prospective for nickel, copper, silver and gold mineralisation.

The project is a joint venture between ARH (70% interest) and Metals (30% interest). ARH are the managers of the project, with Metals being 'free-carried' through to the completion of a bankable feasibility study and the decision to commence commercial mining.

ARH have advised that the review of the recent mapping and biogeochemical survey work is still being concluded.

As a means to further understand the newly attained biogeochemical data and potentially generate additional targets a series of Hyperspectral studies were commissioned in the previous quarter.

The company has now been able to combine the information generated by Global Ore Discovery (processed HyMap data) with the DTM data and the biogeochemical assay data. As a result of this work a biogeochemical sampling programme has been designed to cover all tenements within the Sherlock project area. Figure XX below shows how HyMap data clearly identifies the margin of the Caines Well Granite on the northern part of E47/1769, an area that will be tested in the coming biogeochemical programme.

Approximately 2,600 samples are expected to be collected in the coming quarter and submitted to Genalysis for assay. Field work is expected to span approximately five weeks and assays are likely to be received early in the fourth quarter.

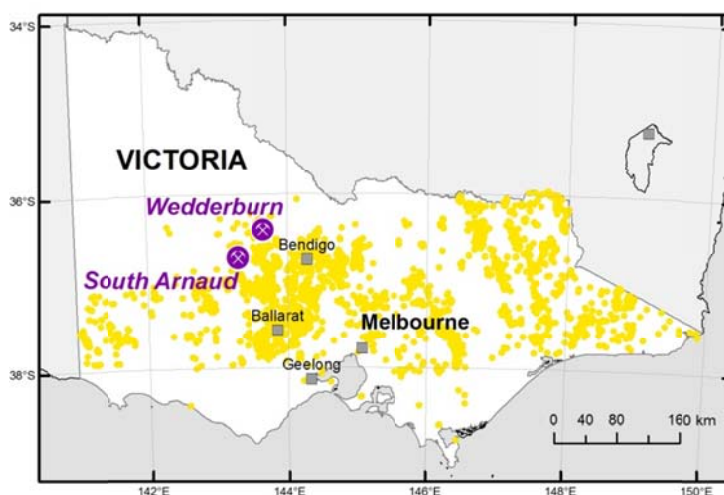
Biogeochemical sampling has been shown to identify nickel anomalism associated with the Sherlock Bay Nickel Deposit. With several areas of anomalism identified beyond the Sherlock deposit area by previous sampling programmes it is hoped the currently planned work will give the company a number of targets sufficient to justify a combined drilling programme.

## GOLD PROJECTS, VICTORIA

Metals holds two low impact exploration licences in western Victoria (Figure 4). The South Arnaud (EL5242) and Wedderburn (EL5243), projects contain significant historic workings that have received little modern and systematic exploration. During the quarter the Scarsdale (EL5244) and Moyston (EL5245) projects were surrendered as they did not meet the Company's exploration criteria.

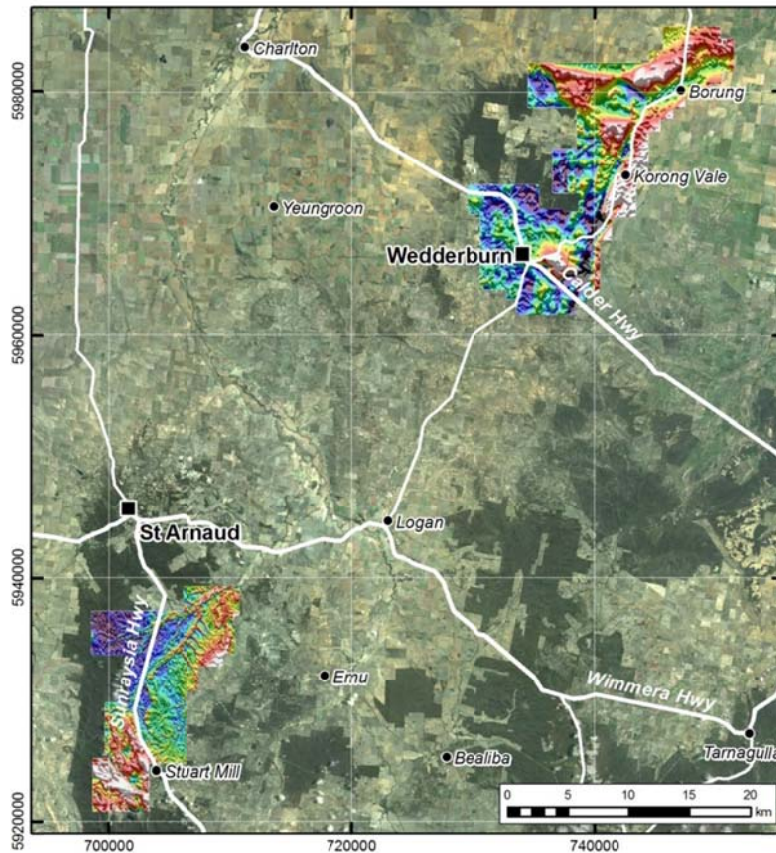
The results of the regional aeromagnetic surveys were received at the end of the quarter (Figure 5). The data is of very high quality and will enable identification of gold targets throughout the project areas. Analysis and interpretation of the data is scheduled to commence shortly.

The Victorian Goldfields were discovered in the gold rushes of the mid-1800s, with all significant gold mining activity ceased by 1930. Government records show that numerous gold prospects, mines and occurrences are documented within the licence areas.



**Figure 4** – Location of the Wedderburn and South Arnaud projects in western Victoria. Yellow dots represent gold deposits and prospects, and their distribution highlights the rich gold belts of Victoria.





**Figure 5** – Results of the magnetic surveys over the Wedderburn (top right) and South Arnaud (bottom left) projects in western Victoria.

**Norman Grafton**  
**Company Secretary**  
**Metals Australia Ltd**

**For further information please contact:**

Norman Grafton – Company Secretary

+61 8 9481 7833

**Or consult our website:**

[www.metalsaustralia.com.au](http://www.metalsaustralia.com.au)

**Competent Persons Declaration**

The information in this release relating to the geology and exploration results of the projects owned by Metals Australia Ltd is based on information compiled by Mr Kieron Munro, Exploration Manager for Metals Australia and a full time consultant to Metals Australia. Mr Munro is a member of The Australian Institute of Geoscientists, a Recognised Professional Organisation by the Australasian Joint Ore Reserves Committee, who has sufficient experience relevant to the style of mineralisation and types of deposits under consideration and to the activity which is being undertaken 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 Munro consents to the inclusion in this report of the matters based on his information in the form and context in which it appears.

**Forward-Looking Statements**

This document may include forward-looking statements. Forward-looking statements include, but are not limited to, statements concerning Metals Australia Ltd's planned exploration programme and other statements that are not historical facts. When used in this document, the words such as "could," "plan," "estimate," "expect," "intend," "may", "potential," "should," and similar expressions are forward-looking statements. Although Metals Australia Ltd believes that its expectations reflected in these forward-looking statements are reasonable, such statements involve risks and uncertainties and no assurance can be given that actual results will be consistent with these forward-looking statements.