



ASX:ZGM

1 June 2011

Company Announcements Office  
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## EXTENSIVE MOLYBDENUM INTERSECTIONS IN ANTHONY SOUTHERN ZONE

### HIGHLIGHTS

- **More high grade molybdenum from diamond drilling in Anthony southern zone**
- **Complements western and northern high grade zones**
- **Further diamond and RC drilling planned to determine extent of the deposit**
- **Resource upgrade anticipated during this month**

### Background

Since its discovery, in 2008, of the Anthony molybdenum (Mo) deposit in the Clermont district of central Queensland, Zamia Metals has had a two-track strategy:

1. At Anthony, to determine the extent of the deposit (both laterally and at depth) and to move the project towards feasibility;
2. Regionally, to test other targets within the Company's extensive tenement portfolio.

During 2010, much of the drilling at Anthony focussed on the western high grade zone of the deposit. Those results were reported on 13 December 2010, and were incorporated into the resource announcement of February 2011.

On 2 February and 9 May 2011, Zamia announced the results of drilling on the northern zone of the deposit.

Zamia's recent diamond drilling has resulted in more high grade molybdenum at depth in the southern zone of the deposit.

### More high grade molybdenum in Anthony southern zone

The significant assay results after the recent diamond tails in the south were:

- Hole RCD70: 402 metres (m) at 533 parts per million (ppm) Mo from 102m to 504m depth, including
  - **9m at 1100 ppm Mo** from 204m to 213m
  - **16m at 1059 ppm Mo** from 221m to 237m
  - **14m at 1037 ppm Mo** from 283m to 297m
  - **12m at 1037 ppm Mo** from 365m to 377m
  - an additional three separate 6m intersections assaying over 1000 ppm Mo.

- Hole RCD52: 51m at 758 ppm Mo from 102m to 153m depth, including
  - **15m at 1014 ppm Mo** from 105m to 120m
  - **12m at 1046 ppm Mo** from 141m to 153m
 and 221m at 398 ppm Mo from 153m to 374m depth, including
  - **12m at 1004 ppm Mo** from 360m to 372m.
- Hole RCD46: 180m at 417 ppm Mo from 256m to 436m depth including
  - **8m at 1113 ppm Mo** from 314m to 322m
  - **6m at 1011 ppm Mo** from 430m to 436m.

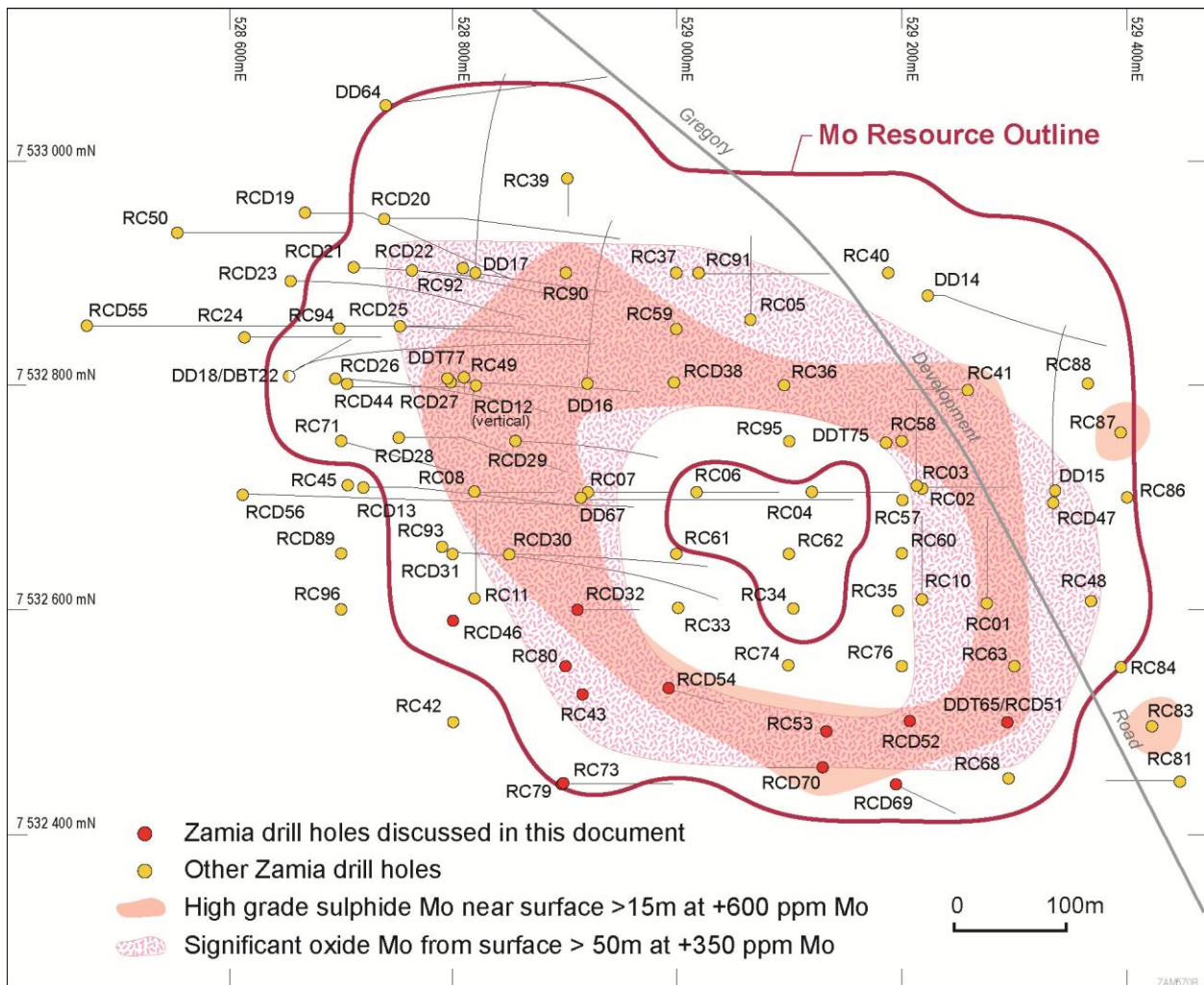
Summaries of assays are shown in Table 1 and locations of all holes described in this report are indicated in Figure 1 (hole collars marked in red).

**Note:** RCD refers to reverse circulation (RC) drilling to around 250m depth and a diamond tail (D) refers to re-entering a previously drilled RC hole and then extending deeper with a diamond drill rig.

Assays of holes previously drilled in the southern zone are summarised in Table 2. Some of the significant results were:

- Hole RCD51: 66m at 564 ppm Mo from surface to 66m depth including
  - **12m at 1034 ppm Mo** from 33m to 45m
 36m at 935 ppm Mo from 66m to 102m depth including
  - **18m at 1364 ppm Mo** from 84m to 102m
 368m at 308 ppm Mo from 102m to 470m depth including
  - **15m at 1041 ppm Mo** from 120m to 135m
  - **8m at 1036 ppm Mo** from 272m to 280m.
- Hole RCD54: 296m at 550 ppm Mo from 108m to 404m depth including
  - **9m at 1125 ppm Mo** from 123m to 132m
  - six separate 3m or 4m intersections above 1000 ppm Mo.
- Hole RC53: 165m at 487 ppm Mo from 87m to 252m depth including
  - **1435 ppm Mo in last 3m** of the hole.

Further assay results for these holes and other holes in the southern zone are shown in Table 2.



**Figure 1:** Drill hole locations and February 2011 resource boundary, together with outlines of significant surface oxide zones and shallow high grade sulphide zones underneath.

**Note:** Holes RC81, RC83, RC84, RC86 and RC87 on the eastern side of the deposit were assayed subsequent to the announcement of the February resource increase. As reported in the Quarterly Activities Report on 28 April, they all had significant intervals above 200 ppm Mo. Their location on, or outside, the resource boundary indicates that the resource might not be closed off on the eastern side.

**Table 1: Assays for recent diamond tail holes in the Anthony Southern Zone**

Hole	Location	Dip (degrees)	Zone	From (m)	To (m)	Length (m)	Mo (ppm)
<b>RCD70</b>	Located in south of Anthony deposit; diamond tail from 207m	80 dip average & drilled west	Oxide	0	66	66	339
			Partial	66	102	36	396
			Sulphide	102	504 EOH	402	533
			incl	165	171	<b>6</b>	<b>1034</b>
			incl	204	213	<b>9</b>	<b>1100</b>
			incl	221	237	<b>16</b>	<b>1059</b>
			incl	257	263	<b>6</b>	<b>1139</b>
			incl	283	297	<b>14</b>	<b>1037</b>
			incl	365	377	<b>12</b>	<b>1037</b>
			incl	467	473	<b>6</b>	<b>1025</b>
<b>RCD69</b>	South; diamond tail from 252m	80 dip average & drilled east south east	Oxide	0	54	54	327
			Partial	54	78	24	270
			Sulphide	78	398 EOH	320	262
			incl	302	306	<b>4</b>	<b>1008</b>
<b>RCD52</b>	South; diamond tail from 210m	90 (vertical)	Oxide	0	69	69	395
			Partial	69	102	33	370
			Sulphide	102	153	51	758
			incl	105	120	<b>15</b>	<b>1014</b>
			incl	141	153	<b>12</b>	<b>1046</b>
				153	374	221	398
			incl	360	372	<b>12</b>	<b>1004</b>
	374	504 EOH	130	210			
<b>RCD46</b>	South west	90 (vertical)	Oxide	0	66	66	217
			Partial	66	81	15	160
			Sulphide	81	256	175	160
				256	436	180	417
			incl	314	322	<b>8</b>	<b>1113</b>
			incl	420	424	<b>4</b>	<b>1180</b>
			incl	430	436	<b>6</b>	<b>1011</b>
				436	470 EOH	34	247

Note: EOH = End of hole

**Table 2: Previously reported holes in the Southern Zone – moving from east to west**

Hole	Location	Dip (degrees)	Zone	From (m)	To (m)	Length (m)	Mo (ppm)
RCD51	South east	90 (vertical)		0	66	66	564
			incl	33	45	12	1034
			Partial	66	102	36	935
			incl	84	102	18	1364
			Sulphide	102	470	368	308
			incl	120	135	15	1041
			incl	272	280	8	1036
				470	498 EOH	28	156
RC53	South	90 (vertical)	Oxide	0	69	69	371
			Partial	69	87	18	432
			Sulphide	87	252 EOH	165	487
			incl	249	252 EOH	3	1435
RCD54	South	75 dip average and drilled east south east	Oxide	0	99	99	356
			Partial	99	108	9	662
			Sulphide	108	404	296	550
			incl	123	132	9	1125
			incl	6 separate intersections of 3m or 4m			
RC73	South	55 dip average and drilled east	Oxide	0	102	102	232
			Partial	102	135	33	177
			Sulphide	135	252 EOH	117	359
			incl	165	171	6	987
			incl	200	216	6	940
RC79	South	90 dip (vertical)	Oxide	0	99	99	223
			Partial	99	120	21	38
			Sulphide	120	252 EOH	132	149
			incl	237	243	6	1192
RC43	South west	90 dip (vertical)	Oxide	0	84	84	314
			Partial	84	105	21	247
			Sulphide	105	237 EOH	132	289
RCD32	South west	73 dip average, drilled east south east	Oxide	0	87	87	409
			Partial	87	102	15	483
			Sulphide	102	342 EOH	240	401
			incl	308	312	4	910
RC80	South west	90 dip (vertical)	Oxide	0	90	90	353
			Partial	90	120	30	239
			Sulphide	120	252 EOH	132	306

## Further drilling planned to expand the resource

Zamia plans to initiate a new diamond tail programme (by extending previously drilled RC holes) to test the extent of the resource at depth. Based on results to date, 14 new diamond tail locations have been identified in all zones of the resource. This programme is scheduled to commence in the near future. It is anticipated that the diamond tails will be drilled to extend the holes to between 400m and 500m vertical depth.

RC drilling has not been completed to define the resource laterally and further holes are also planned. Based on this drilling it is anticipated that additional diamond tails will be required to provide a clearer understanding of the size of the resource.

## Resource update expected this month

The last Anthony resource update produced by independent resource consultants Hellman & Schofield Pty Ltd (H&S) was reported on 25 February 2011. When near-surface oxide and transition (partially oxidised) material was taken into account, the total resource was 233 million tonnes (Mt) at 420 ppm Mo, including high grade zones totalling 26 Mt at 780 ppm Mo (see Table 3 for details including cut-off grades).

**Table 3: Inferred Resource estimates for sulphide, transition and oxide zones  
(by Hellman & Schofield as at February 2011)**

Cut-off grade	Sulphide Resource			Transition and Oxide Resource			Total Resource		
	(ppm Mo)	Tonnes (million)	Grade (ppm Mo)	Contained Mo (million lb)	Tonnes (million)	Grade (ppm Mo)	Contained Mo (million lb)	Tonnes (million)	Grade (ppm Mo)
<b>600</b>	20	810	36	6	690	9	26	780	45
<b>400</b>	82	570	103	25	530	29	108	560	132
<b>200</b>	173	430	163	60	400	54	233	420	216

Note: Significant figures in the tables have been rounded and round-off errors may result

Table 3 shows that, based on drill holes included to date, the Anthony deposit contains higher grade sulphide and oxide material within larger lower grade zones. The near-surface high grade zones, as indicated in Figure 1, would be likely to become the target of early mining in any future development at Anthony, in order to maximise cash flow.

Since the February 2011 resource upgrade, Zamia has received assays for:

- a further 19 RC holes to depths of up to 250m to test the lateral extent of the deposit; and
- an extra six diamond tails to between 400m and 500m to test the depth of the deposit.

A new resource update by H&S is currently being prepared and is expected to be completed during June 2011.

## Impact of high grade molybdenum on Anthony

As indicated above, the February resource update identified 20 Mt of 810 ppm sulphide Mo based on limited deeper diamond drilling as well as incomplete lateral drilling. As shown in Tables 1 and 2 as well as previous reports on the western and northern high grade zones, there are significant intersections above 1000 ppm Mo.

Although Zamia has not yet carried out preliminary mine planning, it is apparent from the resource sections that medium to low grade material would need to be mined to access the higher grade material.

As previously reported, the medium to low grade material can be upgraded (to around 1000 ppm Mo) by a simple pre-concentration process. We therefore expect that the in situ high grade resource can be supplemented by pre-concentration of surrounding medium to low grade material to provide a higher tonnage of overall process plant feed of around 1000 ppm Mo.

The Roskill Information Services Report 2010, notes at Table 12: “Resources of molybdenum by new project, 2009”, that most potential new open-cut molybdenum projects typically have grades less than 800 ppm Mo. Anthony would appear to compare favourably with these projects. Processing higher grade material results in lower capital and operating costs per unit of molybdenum output, thereby significantly improving the project returns.



Coarse molybdenite at 295.95m depth in Hole RCD70



Coarse molybdenite at 218.6m depth in Hole RCD70 (with \$2 coin)

### Scoping study

While there will be ongoing resource evaluations as drilling results are received, an effective Scoping Study cannot be properly undertaken until the extent of the deposit (laterally and at depth) has been confirmed. This is the prime purpose of the proposed deeper diamond tail and RC drill programmes which are likely to continue into the fourth quarter of 2011. Therefore, it is unlikely that the Scoping Study will begin before late 2011 or early 2012.

### Future programme

Based on data obtained to date, Zamia is focussing on the following work:

- Continue detailed exploration of the Anthony molybdenum deposit to determine its extent, both laterally and at depth, by both RC drilling and diamond tails. This is planned to take place over the next six months.
- Continue to develop the geological model for the Anthony deposit.
- Update the Anthony resource estimation as further assays become available. The next update is expected this month and a further two or three updates are likely before the end of 2011.
- Initiate a Scoping Study after the size of the Anthony resource is better understood.
- Continue exploration around Anthony to test for other porphyry-style deposits.



- Continue to test other targets (particularly for gold and copper) on the Company's tenements within the Clermont district.



Ken Maiden  
Executive Chairman

#### **About Zamia (ASX: ZGM)**

Zamia listed on the ASX in January 2007, and holds a portfolio of Exploration Permits for Minerals in the Clermont district of central Queensland. In 2008, Zamia discovered the Anthony molybdenum deposit by drilling on a soil geochemical target. Diamond drilling confirmed the presence of a large porphyry-style deposit. The Company announced an initial resource for the deposit in April 2010. This was followed by announcements of significant resource upgrades in September 2010 and February 2011.

Zamia remains focussed on the Clermont district. As a result of the Anthony discovery, Zamia has identified other targets with potential for gold, copper and molybdenum.

#### **About Molybdenum**

Molybdenum, a metal with an extremely high melting point, is widely used in the steel industry as it improves the strength of steels at high temperature as well as strength to weight ratios and corrosion resistance. It also has uses as a catalyst in petroleum refining, in the production of electrodes and filaments, as a high temperature lubricant and as a fertiliser.

Global demand for molybdenum has been predicted to grow at 4 - 5% per year over the next twenty years. Molybdenum is currently trading at around US\$17 /lb (US\$37,000 /tonne). Industry experts forecast prices to rise considerably in future years.

For further information on Zamia and molybdenum, visit the website [www.zamia.com.au](http://www.zamia.com.au)

#### **Competent Person**

Dr Ken Maiden, MAIG FAusIMM, Executive Chairman of Zamia Metals Limited, compiled the geological technical aspects of this announcement. He has sufficient experience 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". Dr Maiden consents to the inclusion of the matters in the form and context in which they appear and takes responsibility for data quality and "reasonable expectation" assumptions relating to cut-off grades and resource potential.