



# ASX RELEASE

10 September 2013

## Maiden Ore Reserve for Camel Creek JV

Northwest Resources Limited (ASX: NWR, “Northwest”) and Millennium Minerals Limited (ASX: MOY, “Millennium”) are pleased to report a maiden Ore Reserve<sup>1</sup> estimate of **1.075 Mt @ 1.40 g/t Au for 48,300 oz of gold** for the Camel Creek Joint Venture between the companies.

The Camel Creek Joint Venture is a 50:50 mining joint venture between Northwest and Millennium. Under the joint venture, the parties are each entitled to 50% of physical gold produced from the initial four joint venture deposits (Junction, Roscoes Reward, Little Wonder and Round Hill). Ore from the joint venture deposits will be mined and processed by Millennium through its Golden Eagle treatment plant and the parties will share equally the joint venture mining, processing and rehabilitation costs. Millennium is the manager of the joint venture.

The maiden Ore Reserve was prepared by Auralia Mining Consultants Pty Limited (**Auralia**) and includes estimates for the Junction and Roscoes Reward deposits, and the joint venture component of the Little Wonder deposit (Table 1). The Ore Reserve estimate is based on the 2012 Mineral Resource estimate (Table 2) for the Junction, Roscoes Reward and Little Wonder deposits prepared by CSA Global Pty Limited (**CSA Global**). A location map of the joint venture deposits is provided in Figure 1.

**Table 1: Ore Reserves for the Camel Creek Joint Venture**

Deposit	Proven		Probable		Total		
	Ore (t)	Grade (g/t Au)	Ore (t)	Grade (g/t Au)	Ore (t)	Grade (g/t Au)	Metal (oz Au)
Little Wonder	273,800	1.47	3,000	1.37	276,800	1.47	13,100
Junction	135,700	1.96	14,500	2.00	150,200	1.96	9,400
Roscoes Reward	527,500	1.23	120,600	1.26	648,100	1.24	25,800
<b>Total</b>	<b>937,000</b>	<b>1.41</b>	<b>138,100</b>	<b>1.34</b>	<b>1,075,100</b>	<b>1.40</b>	<b>48,300</b>

<sup>1</sup> Reference to all Ore Reserves and Mineral Resources in this announcement are reported in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the **JORC Code, 2004 Edition**)

Table 2: Mineral Resources for the Camel Creek Joint Venture

Deposit	Category	Tonnage	Grade (g/t Au)	Metal (oz Au)
Roscoes Reward 0.5 g/t Au cut-off (2012)	Measured (M)	638,000	1.21	24,700
	Indicated (I)	517,000	1.11	18,400
	<b>Total M &amp; I</b>			<b>43,100</b>
	Inferred	528,000	0.93	15,800
	<b>Total</b>	<b>1,683,000</b>	<b>1.09</b>	<b>58,900</b>
Little Wonder 0.5 g/t Au cut-off (2012)	Measured	408,000	1.32	17,300
	Indicated	127,000	0.93	3,800
	<b>Total M &amp; I</b>			<b>21,100</b>
	Inferred	76,000	0.82	2,000
	<b>Total</b>	<b>611,000</b>	<b>1.18</b>	<b>23,100</b>
Junction 0.5 g/t Au cut-off (2012)	Measured	202,000	1.65	10,800
	Indicated	60,000	1.18	2,300
	<b>Total M &amp; I</b>			<b>13,100</b>
	Inferred	52,000	1.15	1,900
	<b>Total</b>	<b>314,000</b>	<b>1.48</b>	<b>15,000</b>
Round Hill 1.0 g/t Au cut-off (2006)	Measured	-	-	-
	Indicated	18,000	4.80	2,700
	<b>Total M &amp; I</b>			<b>2,700</b>
	Inferred	44,000	4.00	5,300
	<b>Total</b>	<b>62,000</b>	<b>4.30</b>	<b>8,000</b>
<b>Total</b>		<b>2,670,000</b>	<b>1.23</b>	<b>105,000</b>

### Key information relating to the Ore Reserve estimate

#### Mineral Resource estimate

The Mineral Resource estimate used as the basis for the Ore Reserve was compiled by CSA Global and was undertaken by Dr Beilin Shi, a qualified Competent Person and full-time employee of CSA Global.

A mineralised envelope for each deposit was constructed by CSA Global based on lithology, vein intensity and alteration logging, and a grade cut-off of 0.25 g/t Au. The wireframes were interpolated using ordinary kriging (OK). The mineral resource estimates are based on 655 RC drill holes totalling 20,850 m. Bulk densities of 2.49 g/cm<sup>3</sup>, 2.78 g/cm<sup>3</sup> and 2.80 g/cm<sup>3</sup> for the oxide, transition and fresh zones, respectively, were provided by immersion method density measurements from diamond drilling samples from Millennium's Little Wonder and All Nations deposits. Statistical analysis of gold grades resulted in top cuts of 15 g/t Au for Junction and Little Wonder, and 10 g/t Au for Roscoes Reward.

Grade shell models were constrained to geological models for each deposit and defined by a minimum 2 m true width. The grade shells were constructed based on complimenting 5 metre sectional and flitch-based interpretations. Wireframe models were stitched and validated using both Gemcom and Surpac 3D geological modelling software.

The Mineral Resource estimate has been classified based on data density, data quality, confidence in the geological interpretation and confidence in the estimation.

#### **Ore Reserve estimate**

The Ore Reserve estimate was compiled by Auralia, the Competent Person being Mr Daniel Tuffin, a full-time employee of Auralia.

The Ore Reserve estimate is based on a Pre-Feasibility Study (PFS) completed by Auralia. The Camel Creek Joint Venture will operate as part of the greater Millennium Nullagine Gold Project. Accordingly, the PFS utilizes costs and physical parameters sourced from Millennium's currently operating Nullagine Gold Project for application to the Camel Creek Joint Venture.

The process to estimate the Ore Reserves for each of the joint venture deposits involved a series of Whittle optimisations (including sensitivity analysis) and pit designs completed for each deposit (Figures 2, 3 and 4). Following this work, final pit designs were prepared and a life of mine (LoM) mining schedule was applied to the overall project.

The Little Wonder deposit lies partly within Millennium tenements (M46/198 and M46/146) giving Millennium full rights to that section of the Ore Reserve, and partly within tenement M46/166. The section within M46/166 is subject to the joint venture (Figure 4 below). The Ore Reserve estimate in Table 1 includes only the joint venture component of the Little Wonder deposit.

#### **Classification**

The Ore Reserve estimate is based on the Mineral Resource contained within the final open pit design for each deposit classified as "Measured" and "Indicated" after consideration of mining, metallurgical and financial aspects of the project. All Proved Ore Reserves were derived from the Measured Mineral Resources component and all Probable Ore Reserves were derived from the Indicated Mineral Resources component.

#### **Cut-off grade**

The cut-off grade used for the Ore Reserve estimate is the final economic cut-off for each pit shell derived from the Whittle optimisations taking into account the sell (gold) price (applied revenue factor), sell costs, overall costs, processing recovery and mining recovery & dilution. The cut-off grade used for the Ore Reserve estimate is 0.70 g/t Au for each deposit.

#### **Mining factors and assumptions**

The Ore Reserve estimate is based on a conventional open pit mining operation using drilling and blasting, and a 40 tonne articulated mining fleet. The slope sets used for each optimised area of the project is 47° using parameters taken from a geotechnical assessment prepared by Coffey International Ltd. A 5% mining dilution factor was allocated to the Whittle optimisation and a 97% mining recovery factor was applied to the project.

#### **Metallurgical factors and assumptions**

The Ore Reserve estimate is based on the current plant capacity of Millennium's 1.5 Mtpa CIL processing facility. A metallurgical recovery factor of 95.7% is based on diamond core metallurgical testwork results provided by Millennium.

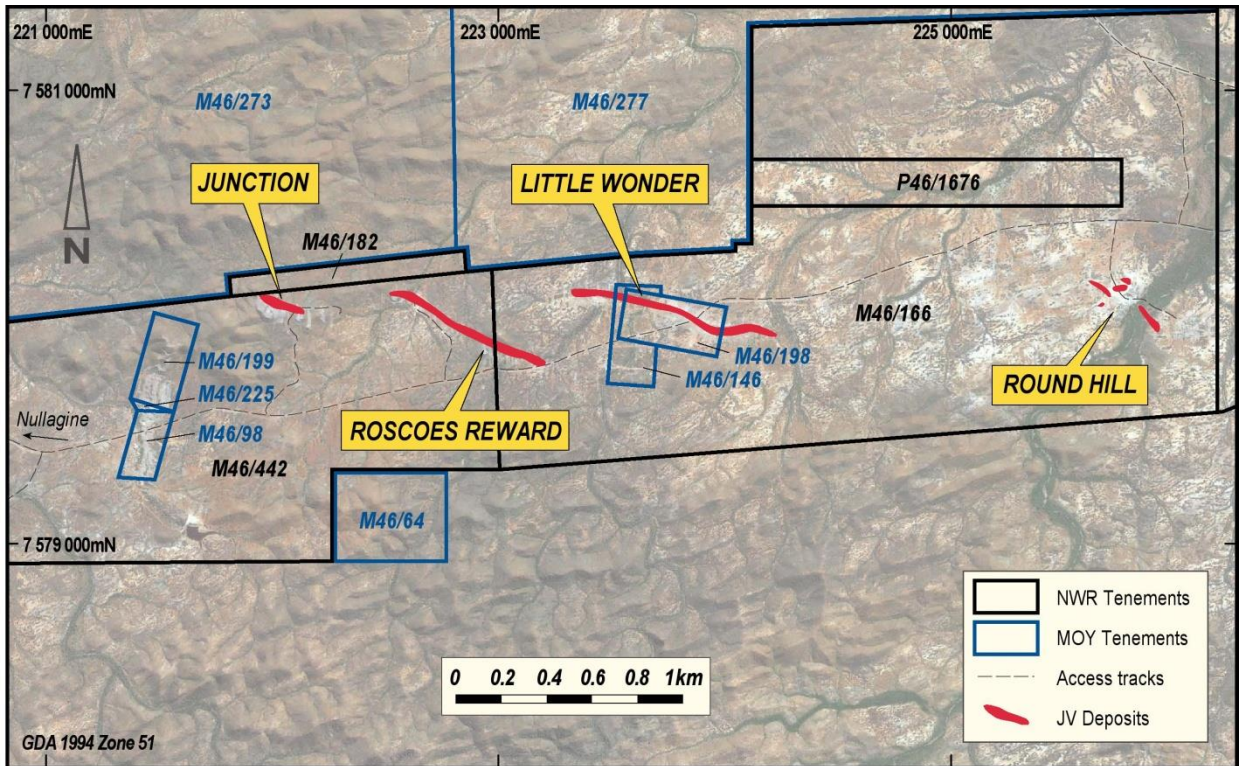
#### **Gold price**

A gold price of AUD1,400 per ounce was used for the Ore Reserve estimate.

**Mining and processing cost assumptions**

The cost assumptions used in the Ore Reserve estimate were provided by Millennium and are reflective of the costs generated on its Nullagine Gold Project. Mining costs are based on a 40 tonne articulated mining fleet. Processing costs include the cost of milling, haulage to mill, grade control and administration costs. Government royalties and refining costs are also included.

**Figure 1: Location of the Camel Creek Joint Venture deposits**



**Note:** Only the portion of the Little Wonder deposit located on M46/166 is subject to the Camel Creek Joint Venture

Figure 2: Roscoes Reward pit design

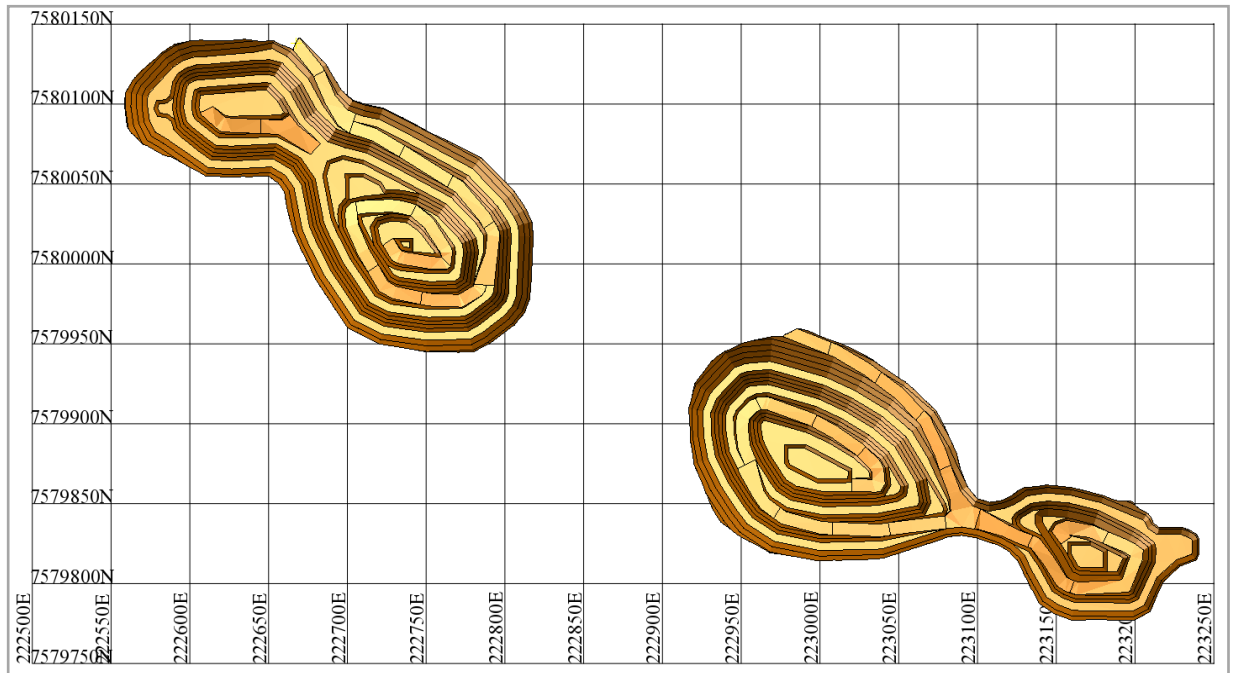


Figure 3: Junction pit design

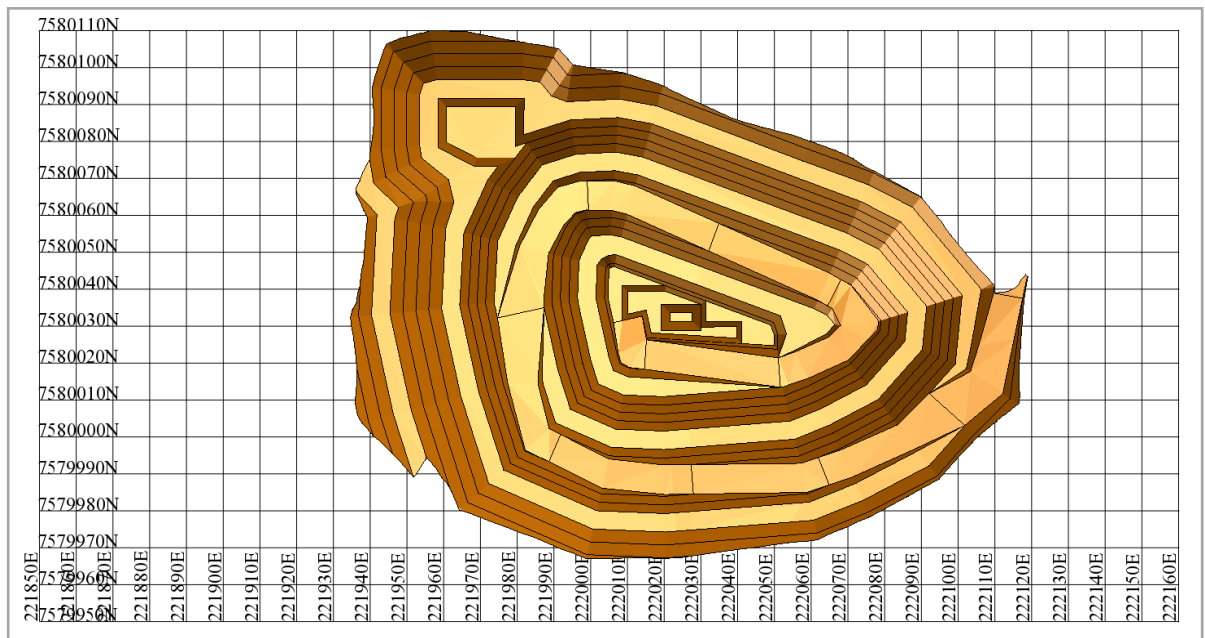
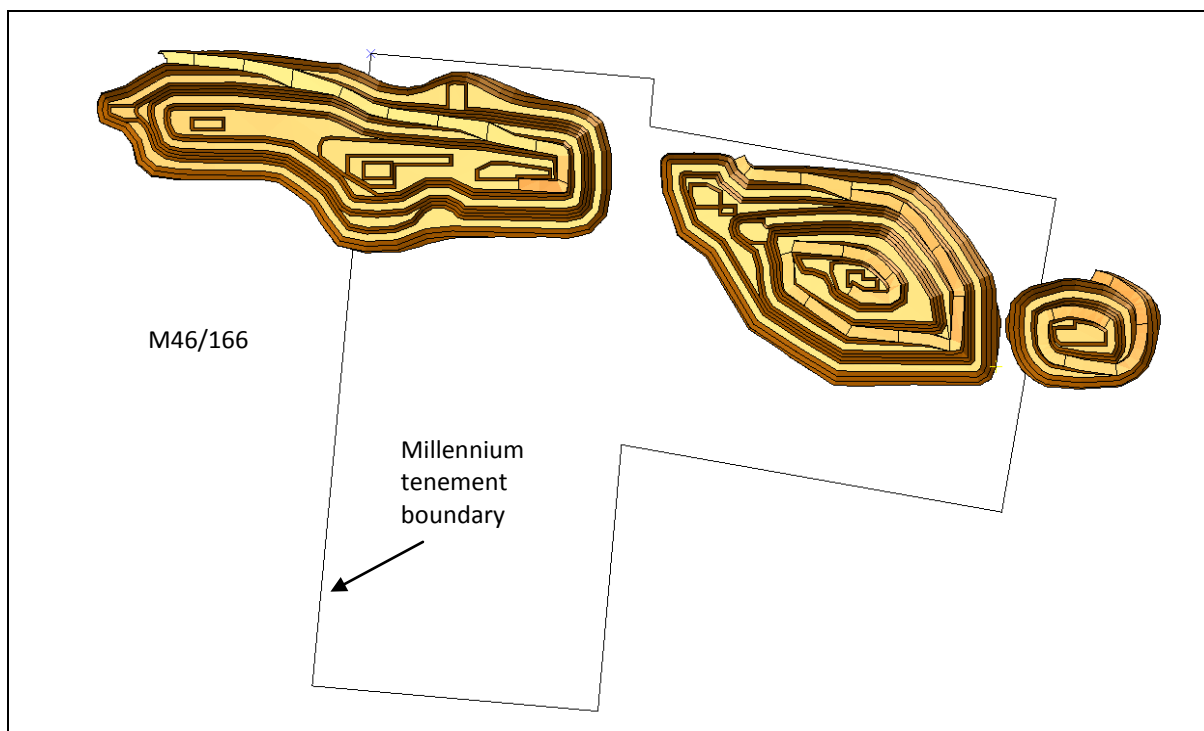


Figure 4: Little Wonder pit design



**Note:** Figure 4 also shows the tenement boundary between the Millennium area (not subject to the Camel Creek Joint Venture) and the area subject to the joint venture located on M46/166.

**For further information, please contact:**

John Merity  
Managing Director  
T: 02 9267 5730  
E: [jmerity@nw-resources.com.au](mailto:jmerity@nw-resources.com.au)



### Competent Person Statements

The information in this announcement that relates to the Ore Reserves is based on information compiled by Mr. Daniel Tuffin (AusIMM). Mr. Tuffin is a full-time employee of Auralia Mining Consultants Pty Limited 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” (the JORC Code, 2004 Edition). Mr. Tuffin consents to the inclusion in this announcement of the matters based on his information in the form and context in which it appears.

The information in this announcement that relates to the Mineral Resources listed in the table below is based on work compiled by the person whose name appears in the same row, who is employed on a full-time basis by the employer named in that row and is a member of the institute named in that row. Each person named in the table below has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he or she has undertaken to qualify as a Competent Person as defined by the JORC Code, 2004 Edition. Each person named in the table below consents to the inclusion in this announcement of the matters based on his or her information in the form and context in which they appear.

Resource	Competent Person	Employer	Professional Institute
Junction	Beilin Shi	CSA Global Pty Ltd	Aus IMM
Roscoes Reward	Beilin Shi	CSA Global Pty Ltd	Aus IMM
Little Wonder	Beilin Shi	CSA Global Pty Ltd	Aus IMM
Round Hill	Fleur Muller	Geostat Services Pty Ltd	Aus IMM

## About Northwest

Northwest Resources Limited is an Australian mineral exploration and development company with two gold projects located in the Nullagine Goldfield in Western Australia's Pilbara region.

### *Blue Spec Shear Gold-Antimony Project (100%)*

Northwest's vision for its flagship project is to bring the high-grade Blue Spec and Gold Spec deposits into production as a narrow vein underground mining operation producing a gold enriched antimony concentrate for direct sale. The Blue Spec & Gold Spec deposits have a current 2004 JORC compliant Mineral Resource estimate of **328,000 oz of gold and 7,900 tonnes of antimony** (646Kt @ 15.8g/t Au and 1.2% Sb). The Blue Spec Shear Zone is a highly mineralised corridor which is underexplored outside the immediate Blue Spec-Golden Spec area. Northwest believes that the initial 5 year project life based on development of the Blue Spec and Gold Spec deposits can be substantially increased through discovery of additional high-grade deposits along the shear.

### *The Camel Creek Gold Project (50% Current Mineral Resources; 100% exploration rights)*

The project contains four shallow open pit gold deposits with a total 2004 JORC compliant Mineral Resource estimate of **105,000oz of gold** (2.67Mt @ 1.23g/t Au) and a 2004 JORC compliant Ore Reserve of **48,300oz of gold** (1.075 Mt @ 1.40 g/t). In 2012, Northwest finalised a production joint venture with established miner Millennium Minerals Limited (ASX code: MOY) to bring the Camel Creek deposits into production. Under the joint venture Northwest contributes the four existing gold deposits in the project and Millennium contributes its mining capability and processing plant located in the Nullagine Goldfield. The parties are each entitled to 50% of the physical gold production from the Camel Creek deposits and will share equally the joint venture mining, processing and rehabilitation costs.