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## Hillside Resource Grows - 1.2Mt Copper and 1.1Mozs Gold

- Inferred Resource of 170Mt @ 0.7% copper & 0.2g/t gold (up more than 70%)
- Contained metal of 1.2 million tonnes of copper and 1.1 million ounces of gold
- 50% to 60% of target area tested – total target size of 1.5Mt to 2.8Mt copper<sup>1</sup>
- 5 drill rigs on site increasing to 8 in 2011 and plans to deliver a definitive feasibility study

### Overview

Rex Minerals Limited (“Rex”) has completed an updated Mineral Resource estimate, reported in compliance with the JORC code, for its 100% owned Hillside copper project on the Yorke Peninsula, South Australia. The Inferred Mineral Resource at Hillside has increased by more than 70% and is now 170Mt @ 0.7% copper & 0.2g/t gold, equating to a total of 1.2 million tonnes (2.6 billion pounds) of copper and 1.1 million ounces of gold.

The updated Resource includes all drilling results received up to 30 November 2010 and has been achieved after only five months of additional drilling following the announcement of Hillside’s Maiden Copper Resource (100Mt @ 0.7% copper & 0.2g/t gold) in July.

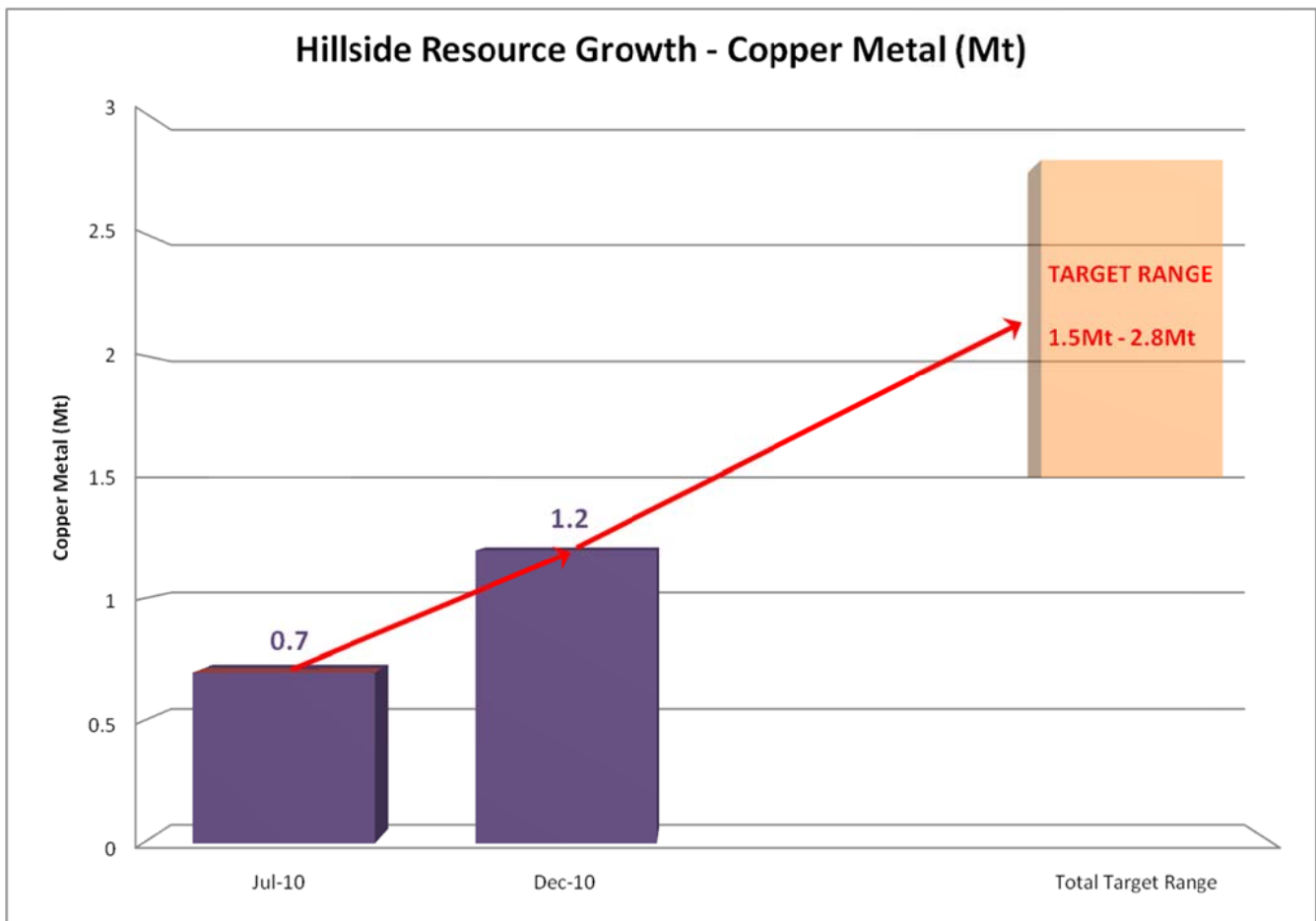
Rex’s Managing Director Mr Steven Olsen said today “This Resource update places the Hillside discovery as one of Australia’s largest within the past decade. The new resource clearly establishes Hillside as a significant copper deposit with a realistic potential of emerging as a commercial copper mine. It also reconfirms our original thesis that the geological terrain where we are exploring (which includes the Moonta Mines, Olympic Dam, Prominent Hill and Carapateena deposits) is Australia’s most well endowed copper belt.”

“The most exciting aspect about Rex today is that Hillside is just one of many potential prospects along the Pine Point copper belt and that the copper mineralisation in the area occurs close to surface and near important infrastructure. The year ahead is shaping up as a game changing one for Rex, with further growth at Hillside, new discoveries on the horizon and a cash position that will enable Rex to take advantage of this highly prospective copper belt.” he said.

Over the next 12 months, Rex will have 5 drill rigs on site dedicated to expanding the copper resources at Hillside towards its defined total target size of between 1.5Mt to 2.8Mt of copper<sup>1</sup>. In addition, Rex expects to complete a scoping study in 2011 and has a two year plan to deliver a definitive feasibility study for the Hillside project, whilst committing an additional 3 drill rigs to test the many other copper-gold targets that exist around the Hillside project.” Mr Olsen said.

The updated Mineral Resource estimate covers between 50% and 60% of a magnetic anomaly which has been used as the main targeting tool for the definition of copper at Hillside (Figure 2). Average assay results have remained relatively consistent throughout the drilling campaign and the previous guidance given for the total target size at Hillside remains unchanged at between 1.5Mt and 2.8Mt of copper (represented by a range of 250Mt to 350Mt at a grade range of 0.6% to 0.8% copper and similar gold grades)<sup>1</sup>.

The Hillside Copper Resource has increased from 700,000 tonnes of contained copper (July 2010) to 1.2 million tonnes of contained copper. This represents a 71% increase. Graph 1 below shows the increase in total resource between July and December 2010 as well as the total target size for the Hillside project.

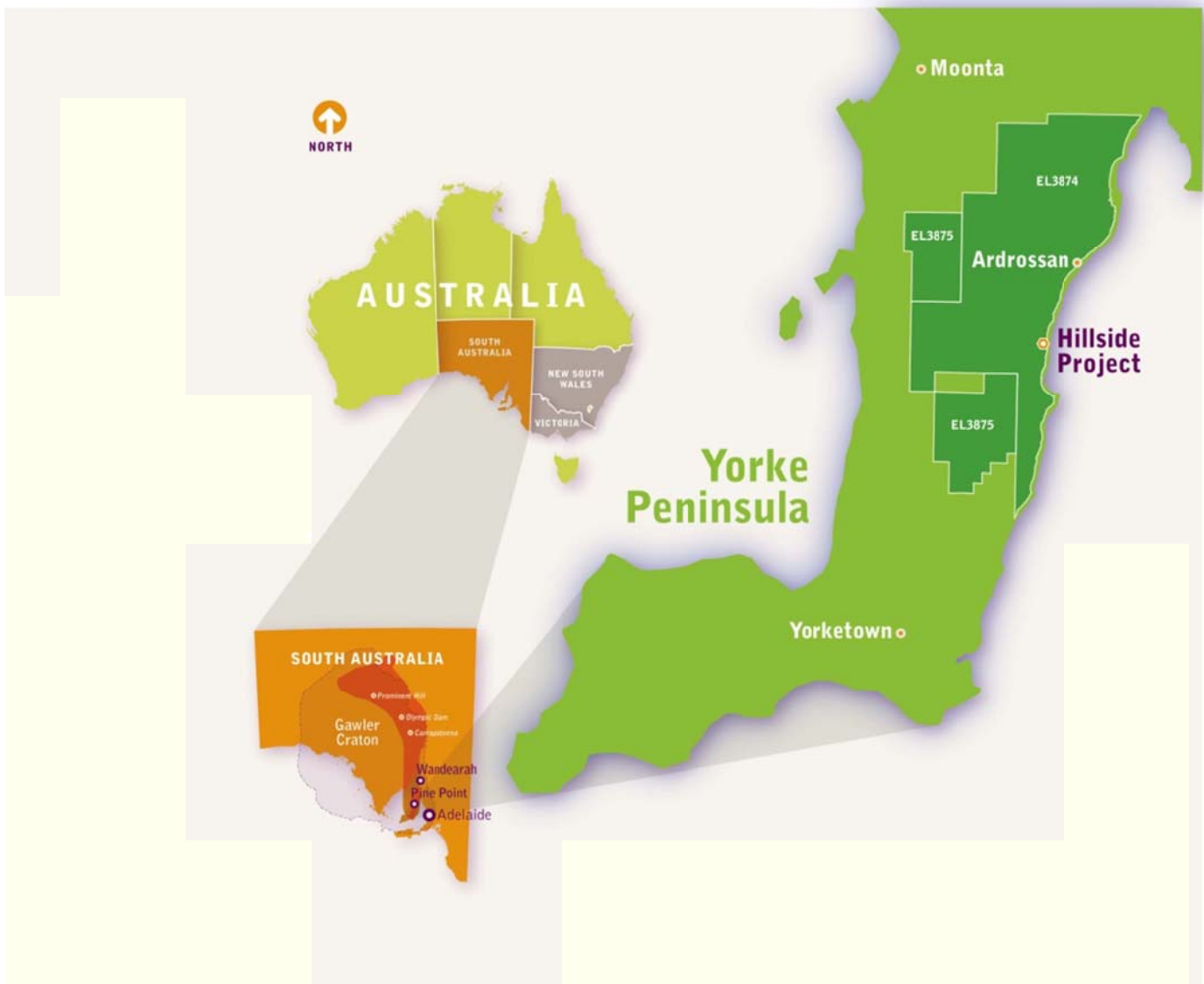


**Graph 1:** Hillside Resource Growth in copper metal (Mt) and total target range for 2011.

<sup>1</sup>The total potential and grade is conceptual in nature, there has been insufficient exploration to define a Mineral Resource in excess of that currently announced, and while Rex has confidence in this target statement, it is uncertain if further exploration will result in the determination of additional Mineral Resources.

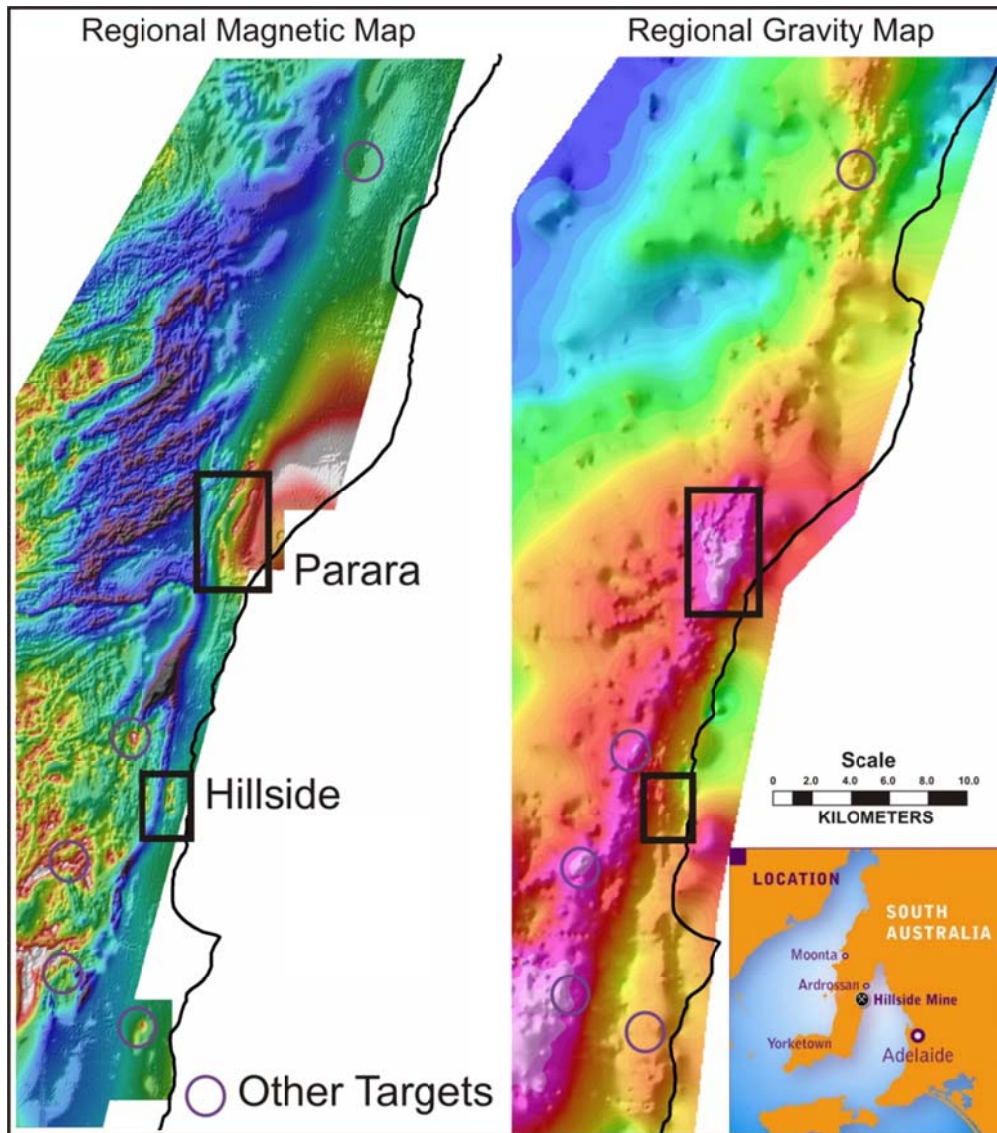
## **Hillside Mineral Resource Estimate**

The Hillside Mineral Resource is situated 12km south of the township of Ardrossan on the Yorke Peninsula, South Australia (Figure 1). The copper mineralisation is a hidden discovery with the host rocks associated with the copper mineralisation covered by a sequence of younger rocks.



**Figure 1:** Location diagram of the Hillside Project Area, South Australia.

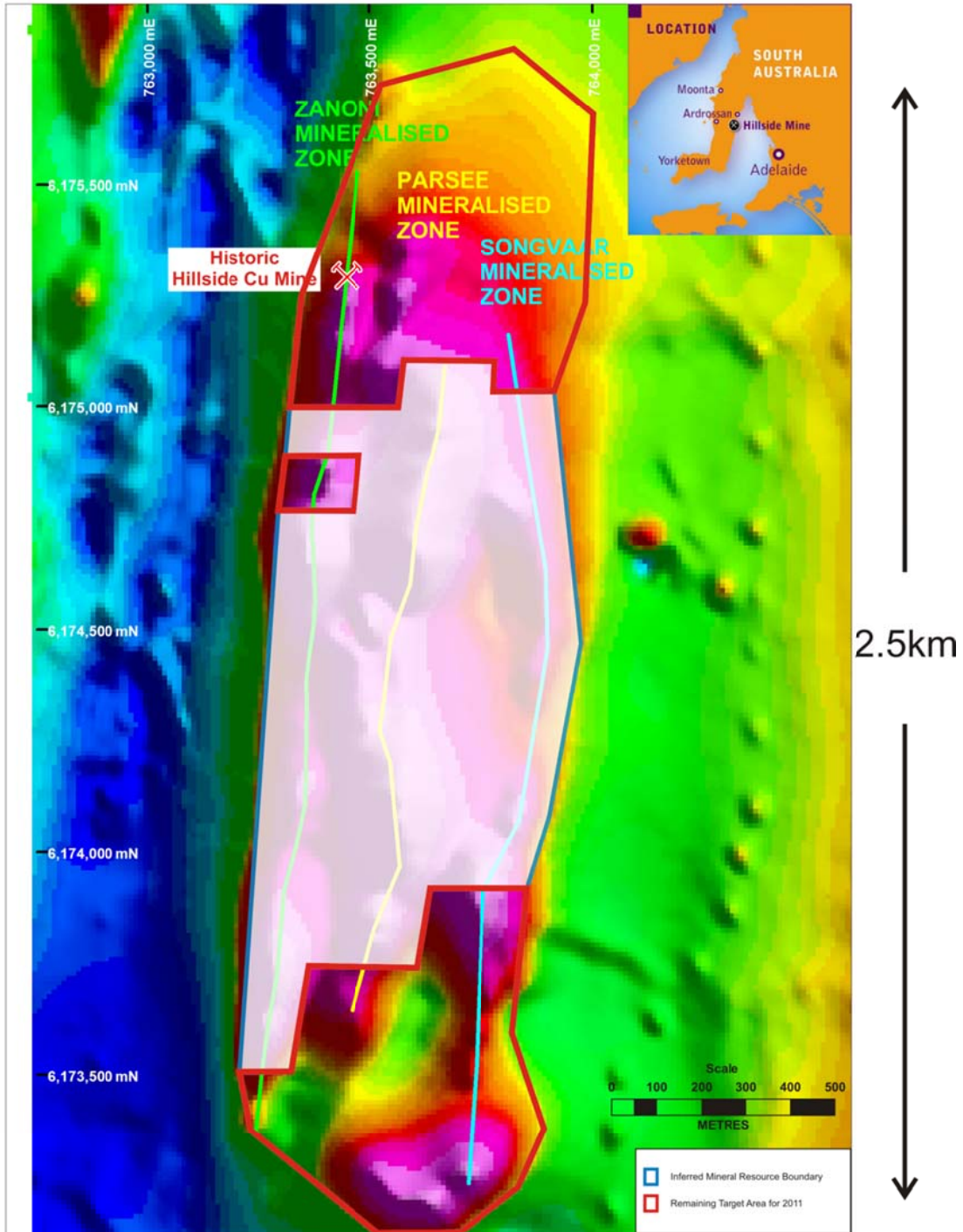
The Hillside project is one of many large-scale copper-gold projects on the Yorke Peninsula that exist within Rex's 100% owned exploration licences on the Yorke Peninsula. The copper-gold targets in the area are typically defined using detailed gravity and magnetic surveys (Figure 2).



**Figure 2:** Magnetic and gravity maps of the Pine Point Copper Belt showing the location of the Hillside project plus additional targets on Rex's exploration licence on the Yorke Peninsula, South Australia.

The copper mineralisation at Hillside is closely associated with the mineral magnetite and the project area has been broadly defined by a magnetic anomaly, which is caused by the presence of magnetite. The Mineral Resource occupies approximately 50% to 60% of the total target area that is defined by the magnetic anomaly down to a depth of just over 550m beneath the surface (Figure 3).





**Figure 3:** Magnetic map of the Hillside project, showing location of the Inferred Resource and remaining area targeted for 2011.

Rex commenced exploring at Hillside in late 2007, soon after listing on the ASX. After a number of drilling programs leading to the discovery of large-scale copper mineralisation at Hillside, Rex commenced Resource definition drilling in January 2010. After six months of dedicated Resource drilling, Rex completed its maiden Mineral Resource estimate at Hillside in July 2010 of 100Mt @ 0.7% copper and 0.2g/t gold.

The updated Hillside Mineral Resource (December 2010) is estimated to be 170Mt @ 0.7% copper and 0.2g/t gold and is wholly classified as Inferred. The Hillside Mineral Resource consists of 1.2 million tonnes of contained copper and 1.1 million ounces of contained gold.

#### Hillside Mineral Resource summary table

Type	Resource Category	Tonnes (million tonnes)	Grade		Contained Metal	
			Cu (%)	Au (g/t)	Copper (tonnes)	Gold (ounces)
Secondary (supergene)	Inferred	23	0.6	0.2		
Primary	Inferred	147	0.7	0.2		
<b>Total</b>	<b>Inferred</b>	<b>170</b>	<b>0.7</b>	<b>0.2</b>	<b>1,200,000</b>	<b>1,100,000</b>

\*Copper Resources reported above 0.2% cut-off grade.

\*Grade is rounded to one significant figure in accordance with the guidance of the JORC Code 2004.

#### For Comment and Further Details

For more information about Rex Minerals and its projects please visit our website [www.rexminerals.com.au](http://www.rexminerals.com.au) or contact:

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#### **Competent Persons Report**

*The information in this report that relates to Exploration Results or Mineral Resources is based on information compiled by Mr Patrick Say who is a Member of the Australasian Institute of Mining and Metallurgy and is a full time employee of Rex Minerals Ltd. Mr Say 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 Say consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.*

## Assessment and Reporting Criteria Table

The following table provides a summary of important criteria related to the assessment and reporting of the Hillside Mineral Resource.

Criteria	Status
<b>Hillside - Sampling Techniques and Data</b>	
Drilling techniques	<ul style="list-style-type: none"> <li>Diamond (HQ3 and NQ2) standard tube drilling and reverse circulation (RC) was used for geological interpretation.</li> </ul>
Drill sample recovery	<ul style="list-style-type: none"> <li>Core recovery was good with an average of 98% recovered.</li> </ul>
Logging	<ul style="list-style-type: none"> <li>Core was logged into an Excel spreadsheet logging system with drop down list pick fields.</li> <li>Core was photographed prior to being logged by the geologist.</li> <li>All core is stored at the Hillside core shed.</li> </ul>
Sub-sampling techniques and sample preparation	<ul style="list-style-type: none"> <li>Core is orientated along the bottom of hole and then half-core samples are taken using a diamond core saw.</li> <li>Bulk density was measured using "Archimedes Principle".</li> <li>Samples were dried, crushed and pulverised to a nominal 85% passing 75 microns.</li> </ul>
Quality of assay data and laboratory tests	<ul style="list-style-type: none"> <li>Cu grades were determined by nitric/perchloric acid digest ICP Atomic Emission Spectrometry determination (ALS ME-ICP61 method).</li> <li>Au grades were determined by 30g Fire Assay (at ALS Perth).</li> <li>Assay data quality was determined through submission of field and laboratory standards, blanks and duplicates which were inserted at a nominal rate of 1 each per 25 drill samples.</li> </ul>
Verification of sampling and assaying	<ul style="list-style-type: none"> <li>Umpire laboratory checks were completed during 2010 and no issues were identified that would prevent the classification of the Cu and Au Mineral Resources.</li> <li>Five pairs of twinned holes were drilled at Hillside and their results are detailed in Rex's internal Mineral Resource Estimate report.</li> </ul>
Location of Data points	<ul style="list-style-type: none"> <li>All diamond drill holes were surveyed and recorded in the Rex SQL database.</li> <li>All drill-holes have magnetic down-hole surveys taken at approximate 24m intervals using a single shot down-hole survey instrument. An azimuth adjustment of +8 degrees was applied for the conversion to MGA Zone 53 (GDA 94) for all magnetic surveys.</li> <li>In addition to the magnetic down-hole surveys, 29 drill holes were surveyed using a North Seeking Gyro (NSG).</li> </ul>
Data spacing and distribution	<ul style="list-style-type: none"> <li>Drilling has been completed on nominal east-west 50m – 100m sections.</li> <li>A total of 120 diamond holes and 113 RC holes directly intersected the main mineralisation envelopes. A total of 143 diamond holes and 145 RC holes were used within and around the Mineral Resource Estimate volume.</li> <li>Approx 53% of drilling was angled at approximately 60-70 degrees to the west, whilst approx 47% of drilling was angled at approximately 60-70 degrees to the east.</li> <li>Drilling is predominantly concentrated between 6173700N and 6175000N and between 60RL and -550RL.</li> </ul>
Orientation of data in relation	<ul style="list-style-type: none"> <li>The majority of drilling has been completed on nominal east-west sections which intersect the strike of the orebody.</li> </ul>

to geological structure	<ul style="list-style-type: none"> <li>• There is no expected bias due to the continuity of the orebody along strike.</li> <li>• The drill hole intersection angle is between 60 and 75 degrees through the 3 main mineralised structures. (Zanoni, Parsee and Songvaar).</li> </ul>
<b>Estimating and Reporting of Hillside Mineral Resources</b>	
Database integrity	<ul style="list-style-type: none"> <li>• The Hillside database is a SQL system.</li> <li>• Data is logged directly into an Excel spreadsheet logging system with drop down list pick fields.</li> <li>• Data is then transferred to the master computer on site and then uploaded to the Hillside SQL database.</li> <li>• Logging is completed on portable computers.</li> <li>• Validation checks are written into the SQL database and these are activated via database and user triggers to ensure the data is correct with respect to fundamental quality issues.</li> </ul>
Geological interpretation	<ul style="list-style-type: none"> <li>• The mineralization at Hillside forms part of a large regional alteration system. Interpretation and geochronological analysis of drill samples from Hillside suggests a genesis related to the Gawler Range Volcanic / Hiltaba volcano-plutonic event (ca. 1570-1590Ma).</li> <li>• The Hillside ore system is built on regional N-S trending mineralizing structural channels which carried copper and gold bearing hydrothermal fluids. Copper-gold mineralization is hosted by a sequence of intensely altered metasediments and skarns.</li> <li>• The geology at Hillside is categorized into the following lithologies and structural zones from west to east: <ul style="list-style-type: none"> <li>• Hangingwall Package: a relatively unaltered package of metasediments and sediments.</li> <li>• Pine Point Fault (PPF): representing the western boundary of the Hillside copper and gold mineralisation, containing rubble to milled fault breccias in a north-south trending zone of 2-10 metres true thickness. It separates the hangingwall package from the skarn/metasedimentary package and is unmineralised.</li> <li>• Skarn/metasedimentary package: a sequence of intensely altered metasediments and skarns belonging to the Wallaroo Group (Moonta Subdomain), which are intruded by MesoProterozoic granitoids within the main mineralised area. The intrusions comprise variable width dykes of micro granite to micro diorite (plus occasional coarser phases). The sequence is also intruded by micro-gabbro which may represent late stage Carramulka Gabbro equivalents or early sills.</li> <li>• Footwall Package: a significant stock/pluton of granite which lies in the eastern sector of the deposit.</li> </ul> </li> <li>• Primary copper-gold mineralization occurs in vertical to sub-vertical magnetite and hematite rich lenses within the skarn/metasedimentary package.</li> <li>• Secondary copper-gold mineralisation occurs within a shallow sequence of weathered basement rocks. Secondary mineralisation is found throughout the deposit.</li> </ul>
Hillside Dimensions	<ul style="list-style-type: none"> <li>• Primary mineralisation zones within the Hillside deposit are sub-parallel to the lithostratigraphic architecture.</li> <li>• Primary Hillside mineralisation strikes approximately north-south and has variable steep dips (70 to 80 degrees) to the west and occasionally east.</li> <li>• Secondary mineralisation strikes approximately north-south and tends to be flat lying to shallow dipping (on average 10 to 30 degrees). (Occasional vertical to sub-vertical zones</li> </ul>



	<p>of secondary mineralisation have also been observed).</p> <ul style="list-style-type: none"> <li>Mineralisation has so far been observed from 6173250N to 6175100N, 763200E to 764000E and 60RL to -800RL. Between 50% and 60% of the total target size has been tested and the deposit remains open in all directions and at depth.</li> </ul>
Estimation and Modelling Techniques	<ul style="list-style-type: none"> <li>Polygons and hence triangulations are based on interpretations completed on 100m northing sections.</li> <li>Triangulated interpretations have been domained into the following constrained bodies: <ul style="list-style-type: none"> <li>400 (Dart)</li> <li>500 (Zanoni)</li> <li>700 (Parsee)</li> <li>800 (Songvaar)</li> <li>930 (Primary Gold only)</li> <li>940 (Secondary Gold only)</li> <li>950 (Secondary Cu)</li> </ul> </li> <li>In addition to these mineralised domains, lithological domains, (+/- Cu/Au mineralisation), have also been constructed. These include: <ul style="list-style-type: none"> <li>Hangingwall lithologies</li> <li>Footwall lithologies</li> <li>Pine Point Fault</li> <li>Barren zones within mineralised domains</li> <li>Base of Oxidation</li> <li>Cover Sequence</li> </ul> </li> <li>A priority system of 18 domains was set up to account for overlapping mineralisation, intrusive rock shapes and cover sequence lithologies.</li> <li>The block model was constructed with parent blocks of 20mE by 20mN by 12mRL.</li> <li>Ordinary kriging (OK) to the parent block size was used to estimate Cu, Au, Ag, U, Fe, S and Co grades separately.</li> <li>Up to three estimation passes with increasing search neighbourhood size were run for all domains.</li> <li>An Octant based search limited composites to a maximum of 4 composites per octant.</li> <li>4m assay composites were used. A small number of composites were retained with a length of less than 4m due to the complexity of the orebody.</li> <li>Estimation applied composite length weighting.</li> </ul>
Quantitative Kriging Neighbourhood Analysis (QKNA)	<ul style="list-style-type: none"> <li>A quantitative kriging neighbourhood analysis was undertaken to assess the most appropriate combination of variables and parameters for each Hillside domain. The following was utilised during estimation for all domains except domain number 400: <ul style="list-style-type: none"> <li>Pass 1 – 50m by 40m by 10m.</li> <li>Pass 2- 100m by 80m by 20m.</li> <li>Pass 3 – 200m by 160m by 30m</li> </ul> </li> <li>Domain 400 used the following estimation criteria <ul style="list-style-type: none"> <li>Pass 1 – 40m by 40m by 10m</li> <li>Pass2 – 80m by 80m by 20m.</li> <li>Pass 3 – 160m by 160m by 30m.</li> </ul> </li> <li>A minimum of 4 and maximum of 32 composites were used per estimate.</li> </ul>
Moisture	<ul style="list-style-type: none"> <li>Tonnes have been estimated on a dry basis.</li> </ul>

Cut-off parameters	<ul style="list-style-type: none"> <li>• Copper Mineral Resources have been reported above a 0.2% Cu block grade cut-off.</li> </ul>
Mining factors or assumptions	<ul style="list-style-type: none"> <li>• Conceptual open pit mining studies are being undertaken on Mineral Resources</li> </ul>
Metallurgical factors or assumptions	<ul style="list-style-type: none"> <li>• Preliminary metallurgical test work is currently being undertaken and forms part of a scoping study which is due for completion in early 2011.</li> </ul>
Bulk density	<ul style="list-style-type: none"> <li>• Approximately 20% of all sampled core has been measured for density.</li> <li>• The method used the entire air-dried core sample weighed in air and water, which was used to estimate the density.</li> <li>• Regression analysis of iron assays and density was applied to estimate the density of blocks given the ordinary kriged iron value. Where blocks were not estimated for iron, the average density for the domain was assigned.</li> <li>• Several domains with too few iron analyses were assigned the average domain density.</li> </ul>
Classification	<ul style="list-style-type: none"> <li>• Mineral Resources have been classified on the basis of geological and grade continuity confidence.</li> <li>• As a result, Inferred Mineral Resources have an average spacing of up to 100mN by 100mRL.</li> </ul>
Block Model Verification	<ul style="list-style-type: none"> <li>• An Inverse Distance (ID) block model was run as a comparison check to the Ordinary Kriged (OK) July 10 block model. This comparison was satisfactory. No comparison model was run for the Dec 10 Mineral Resource update.</li> </ul>
Audits or Reviews	<ul style="list-style-type: none"> <li>• An audit and review of sampling techniques, data collection and modelling parameters for Hillside was undertaken by AMC Consultants Pty Ltd in July 10.</li> <li>• An external and independent review of the July 2010 Hillside Mineral Resource Estimate was undertaken by AMC Consultants Pty Ltd.</li> </ul>