



HAVILAH RESOURCES NL
ABN 45 115 281 144



North Portia Copper-Gold-Molybdenum Deposit Resource Statement

Havilah Resources

Havilah Resources NL aims to become a significant producer of copper, gold, cobalt and molybdenum from its 100% owned Kalkaroo, Mutooroo and Benagerie projects, which are at advanced feasibility stage. It holds more than 6,500 km² of surrounding tenements in the highly mineralized Curnamona Province of South Australia, where it maintains an active drilling program. Deposits of iron ore, tin and hard rock uranium have been drilled, with good exploration upside. Havilah owns strategic interests in uranium explorer, Curnamona Energy (45.4%) and hot rock geothermal explorer, Geothermal Resources (58%.)

Issued Capital

82 million ordinary shares
20.495 million listed options
2.425 million unlisted options

Contact

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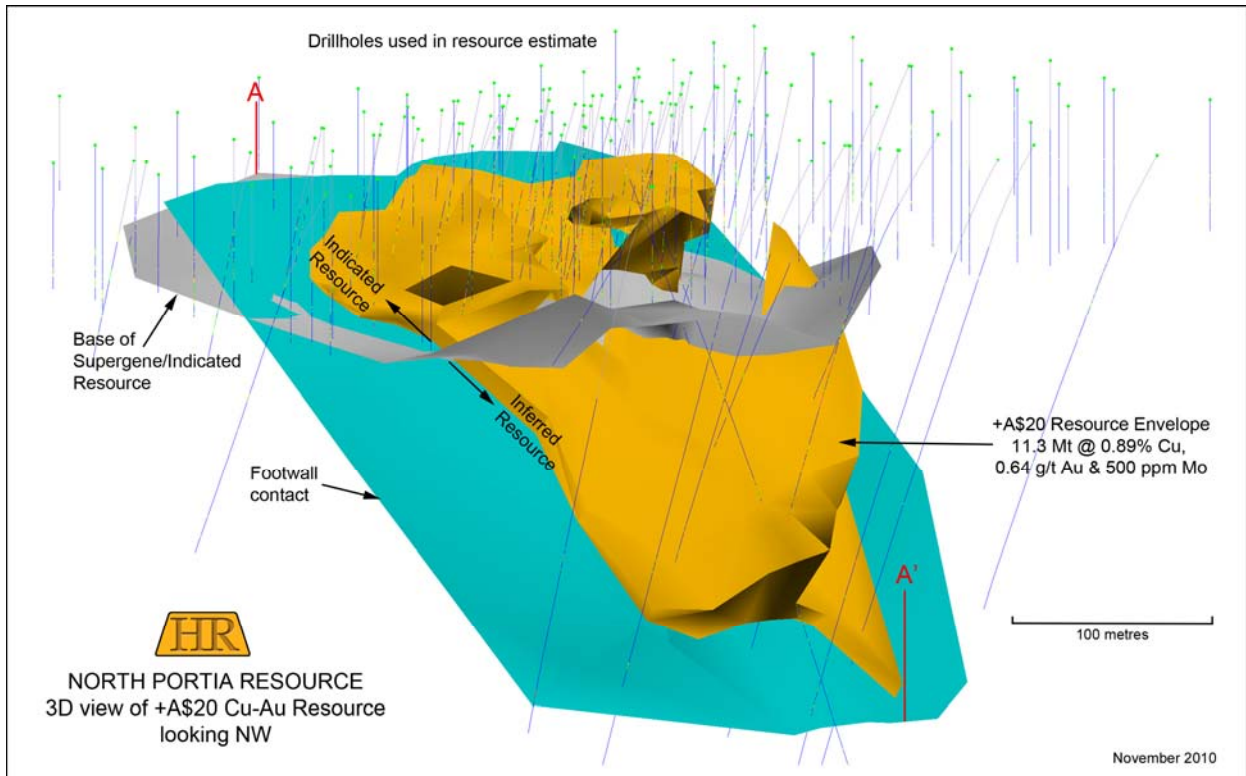
Highlights

- 11.3 million tonnes of 0.89% Cu, 0.64 g/t Au and 500 ppm Mo indicated plus inferred JORC resource estimate for North Portia.
- Translates to a metal inventory of 101,000t copper 234,000 oz gold and 5.68 million kg of molybdenum.
- Ore is very similar to Kalkaroo and could potentially provide several years additional mill feed for a mining operation at Kalkaroo.
- Well understood geological model with high discovery potential along strike.



Resource drilling at North Portia

Havilah Resources NL (Havilah – ASX:HAV) advises that as part of ongoing pre-feasibility studies, its geologists have generated a detailed geological model of the North Portia deposit as shown in the following picture.



This geological model has formed the basis for an initial JORC compliant resource estimation, completed by a consultant geologist experienced in this field using Vulcan 3D software, resulting in a **combined indicated and inferred resource of 11.3 million tonnes of 0.89% copper, 0.64g/t Au and 500 ppm Mo** as detailed in the following table.

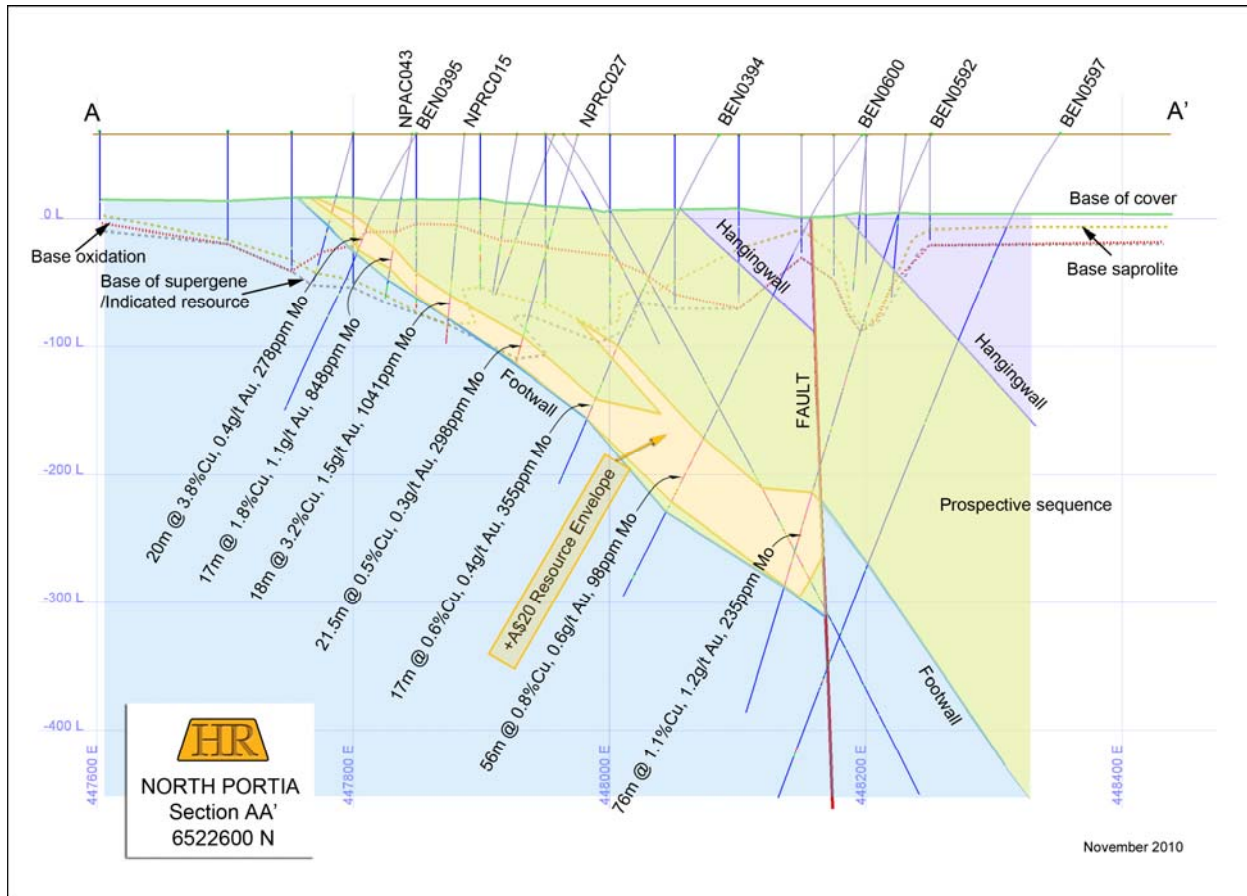
North Portia Resource Estimate – November 2010

Classification	Category	Tonnes	Cu%	Au ppm	Mo ppm	SG
Indicated	Supergene	2,750,146	1.00	0.65	451	1.91
Inferred	Sulphide	8,609,519	0.85	0.64	531	2.65
Total Ind & Inf	All	11,359,665	0.89	0.64	500	2.42
Indicated	Supergene	7,732,410	Supergene Mo only		340	1.81

Mineral resources have been classified based on the degree of confidence in the continuity of mineralisation, the quality of the data and the drill hole spacing. The indicated resource coincides with the base of weathered rock with higher grades of copper due to supergene enrichment in the weathering zone. The primary resource (in fresh unweathered rock) has been classified as inferred, because of the wider drill hole spacing and hence less certainty in the continuity of the mineralisation.



0.05% molybdenum (Mo) occurs within the defined copper and gold resource, but molybdenum also forms an extensive halo surrounding the supergene copper-gold mineralisation. Molybdenum mineralisation lying within a 100ppm envelope was modeled, resulting in a significant standalone molybdenum resource in the supergene zone as shown in the bottom row of the above table. Molybdenum in the supergene zone is frequently observed as free grains of molybdenite (molybdenum sulphide), and is often concentrated at shallower depths than the copper and gold, and depending on recoveries achievable could potentially enhance early mining cashflows.



Based on this resource, North Portia contains more than 100,000 tonnes of copper, and approximately 234,000 oz gold and 5.68 million kg of molybdenum, as summarised below .

North Portia Metal Inventory – November 2010

Classification	Category	Tonnes	Cu tonnes	Au oz	Mo kg
Total Ind & Inf	All	11,359,665	101,000	234,500	5,680,000
Current price (A\$)			8,500/t	1,380/oz	36/kg

The above resource estimate relies on assay results from a total of 106 drillholes, of which roughly half were drilled by Pasminco and the other half by Havilah. The resource block model is constrained by a wire framed geological interpretation of the mineralisation, with the boundaries mostly defined by a \$20 ore value cutoff, calculated at the conservative prices of A\$1,000 /oz for gold and A\$5,000 /



tonne copper. The table at the end of this report summarises geological parameters relevant to the resource estimate.

The copper-gold-molybdenum mineralisation at North Portia is located on the easterly dipping limb of the Benagerie Dome. There are many similarities with the larger Kalkaroo deposit 30 km to the south, especially in the replacement and vein/breccia style mineralisation hosted by a distinctive 150m thick package of carbonate rich weakly metamorphosed siltstones and shales. This host sequence is sandwiched between magnetic footwall rocks and variably graphitic hangingwall weakly metamorphosed shales. The mineralized bedrock is typically overlain by approximately 60 metres thickness of younger barren sediments.

The primary sulphide mineralisation consists predominantly of chalcopyrite, pyrite and molybdenite, with comparatively simple metallurgy, as determined by Pasminco test work. The supergene or secondary mineralisation is developed in the weathering profile above the primary mineralisation. The weathering profile typically consists of totally oxidised weathered rock overlying non oxidised sulphide bearing weathered rock, which grades to fresh rock containing the primary sulphide mineralisation. In the non-oxidised zone, the supergene sulphides consist predominantly of pyrite and chalcocite, with lesser bornite, chalcopyrite and molybdenite. Metallurgical test work is planned to test recoveries of these sulphide minerals in the supergene zone.

The present drilling focussed on comprehensively defining the upper supergene enriched part of the resource that was considered directly amenable to open pit mining. There is high potential to convert the deeper inferred resources to indicated/measured resources by infill drilling between Pasminco's widely spaced mineralised diamond drill intersections.

The completed geological resource block model forms the basis for detailed mine design work currently being conducted by a senior mining engineer. The objective is to generate an optimum open pit mine design using current estimates of capital and operating costs in order to develop an economic model for mining the North Portia deposit. This will determine whether the North Portia deposit can be mined as a standalone operation or whether it will provide additional ore feed for the Kalkaroo processing plant.

Based on earlier Pasminco exploration drilling there is known to be good potential for discovery of additional resources in the host sequence for several tens of kilometers along strike in both directions from North Portia.

Dr K R Johnson
CHAIRMAN

This Mineral Resource Statement has been compiled in the accordance with the guidelines defined in the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (The JORC Code, 2004 Edition).

The information in this report has been compiled by Dr Bob Johnson who is a member of the Australasian Institute of Mining and Metallurgy and Dr Chris Giles who is a member of The Australian Institute of Geoscientists. Drs Johnson and Giles are employed by the Company on consulting contracts. They have sufficient experience which is relevant to the style of mineralization and type of deposit under consideration to qualify as Competent Persons as defined in the JORC Code 2004. Drs Johnson and Giles consent to the release of the information compiled in this report in the form and context in which it appears.

Enquiries should be directed to Dr Bob Johnson, Chairman, on (08) 83389292



Assessment and Reporting Criteria

The following table provides a summary of important criteria related to the assessment and reporting of the North Portia Copper – Gold – Molybdenum resource.

Criteria	Status
Sampling Techniques, Assay Data, Drilling Details	
Havilah drillholes used in resource estimation	<ul style="list-style-type: none"> • 54 Havilah holes totalling 7367m, comprising 36 AC (4483m), 16 RC (2460m) & 2 DD (424m inc P/C's) holes, were used in defining the resource, out of 62 Havilah holes in the prospect, totalling 8483m, comprising 40 AC (5059m), 20 RC (3000m) & 2 DD (424m inc P/C's). One DD hole was not assayed, so was excluded from the estimation.
Non-Havilah drillholes used in resource estimation	<ul style="list-style-type: none"> • 52 Pasminco holes totalling 10082m, comprising 39 AC (4653m) & 13 DD (5429m inc P/C's) holes, were used in defining the resource, out of 130 Pasminco holes in the prospect, totalling 20553m, comprising 107 AC (12448m), 4 RC (471m) & 19 DD (7634m). • There is good general correlation of the geology and assay data between the Pasminco and Havilah drillholes.
Drilling techniques	<ul style="list-style-type: none"> • All Havilah AC holes were drilled using a standard 120mm bit size. • All RC holes were drilled using standard face sampling hammers with bit sizes ranging from 120mm to 136mm. • Pasminco AC holes are in the ratio of approx 50:50 NQ (76mm hole) & HQ (96mm hole) sizes. • Diamond core sizes ranged from NQ (50mm) to PQ3 (83mm). The larger sizes & triple tube methods being used where required to maximise core recovery in weathered or broken ground. • Drill core was routinely oriented where possible, by the spear method.
Sampling techniques	<ul style="list-style-type: none"> • Havilah AC & RC samples were collected at 1m intervals. Initial 3m grab composite assay sampling outlined anomalous intervals, which were then re-sampled by riffle splitting on a 1m basis to produce 2-3kg assay samples. • Pasminco AC samples were collected at 1m intervals. Initial 3m grab composite assay sampling outlined anomalous intervals, approx 50% being re-sampled by riffle splitting on a 1m basis to produce 2-3kg assay samples. Approx 50% of the complete samples were taken to the lab, prepared in total and rotary split at the lab. • All drill core was sampled using a diamond saw. Havilah sampled ¼ core on a 1m basis. Pasminco sampled ½ core on a 1m basis where mineralised, otherwise on a 2m basis.
Drill sample recovery	<ul style="list-style-type: none"> • Havilah AC & RC sample quality & recovery was routinely logged and overall considered adequate. Holes were generally stopped if sample quality became unacceptable (small, wet or contaminated), particularly from hole 36 onwards. • Core recovery was routinely recorded by both Havilah & Pasminco. • Core recovery for the mineralised intersection in the supergene zone of the only Havilah diamond hole (NPDD034) used in the estimate, averaged 93%. Core recoveries overall averaged 92% in the supergene zone & 100% in fresh rock for this hole. Averages for hole NPDD035 (not used) were 57% in supergene & 97% in fresh core. • Core recovery for the mineralised intersections of the Pasminco holes used in the estimate averaged 64% in saprolite (1 hole only, BEN395) & 98% in fresh rock for all the other holes.



Logging	<ul style="list-style-type: none">• All Havilah AC, RC & diamond holes were logged by experienced geologists. The 1st 33 holes were logged on paper, the logs subsequently coded & digitised. The remainder were logged directly into a digital logging system, the data uploaded into an Excel spreadsheet, which was subsequently converted to an Access database.• All Havilah drillcore and RC chip trays have been photographed.• All Havilah & Pasmenco drillcore & chip trays are stored at Havilah's camp at Yarramba Station.
Quality of assay data and laboratory tests	<ul style="list-style-type: none">• Havilah samples were assayed by Amdel from 2005-2006. Initial 3m composites were assayed for Au & base metals by aqua regia digest & ICP MS finish (ARM3), with Cu & Mo also by perchloric-HCL digest & AAS finish (AA1R). Follow up 1m riffle split samples were assayed for Au by 40g fire assay (FA1) & base metals by perchloric-HCL digest with ICP finish (MET1).• Havilah samples were assayed by ALS from 2007-2010. Samples were assayed for Au by 50g fire assay (Au-AA26) & base metals by multi-acid (inc HF) digest with ICP AES finish (ME-ICP61). Over range samples were assayed by 'ore grade' 4 acid digest method with ICP AES finish (ME-OG62). Follow up 1m riffle split samples were only assayed for Au, Cu & Mo.• Pasmenco AC samples for holes up to BEN419 were assayed by ALS for Au by 50g fire assay with AAS finish (PM209) & base metals by multi-acid (inc HF) digest with ICP AES finish (IC587). Most other AC holes were assayed for Au by Amdel using the 1kg leachwell assisted cyanide leach bottle roll method (LW4) & for base metals by multi-acid (inc HF) digest with ICP MS finish (IC3M). Minor AC holes were assayed for Au by Aminya Labs using the cyanide leach bottle roll method. Cyanide leach was used to negate any potential coarse Au problem, as seen at Portia.• Pasmenco core holes BEN394 & 395 were assayed by ALS for Au by 50g fire assay with AAS finish (PM209) & base metals by multi-acid (inc HF) digest with ICP AES finish (IC587). All other core holes were assayed by Amdel for Au by 50g fire assay with AAS finish (FA3, FA1) & base metals by multi-acid (inc HF) digest with ICP OES finish (IC3E). Appropriate methods (eg MET1) were used for over range results.• The methods used are considered to be appropriate, although the use of the cyanide leach method for Au was probably not necessary.• Havilah monitored assay data accuracy and precision by the submission of standard, blank or duplicate samples at a nominal rate of 1 per 25 drill samples, in a rotating sequence.• Pasmenco monitored assay data accuracy and precision by the submission of a standard at a nominal rate of 1 per 50 & a duplicate at 1 per 20 drill samples.• No data quality issues of significance were identified.
Verification of drilling methods and sampling	<ul style="list-style-type: none">• Variability of assays between average spaced (15-50m) holes in the supergene zone is generally fairly high.• Although no specific twin holes were drilled, a small number of holes either cross or come within a few metres of others and have been used for comparison. Unfortunately, the examples are only in weakly mineralised material.• Four examples involving AC or RC holes only were investigated (BEN1033 vs NPAC005 vs NPAC053, BEN386 vs BEN1050, BEN387 vs NPRC027, BEN1025 vs NPRC028).• Three examples of DD holes very close to or crossing AC/RC holes or pre-collars were investigated (BEN395 vs BEN389, BEN394 vs BEN1051, BEN394 vs BEN1050).• Three examples of DD holes very close to or crossing other DD holes were investigated (BEN600 vs BEN1051, BEN592 vs BEN1051, BEN597 vs BEN1051).• There is insufficient data, particularly in well mineralised material, to make a

	<p>definitive comparison. Although there are some significant local variations, the available data suggests there appears to be generally good agreement in the order of magnitude of the grades & the intersection widths between crossing or very close spaced holes, both Havilah's & Pasmaenco's.</p> <ul style="list-style-type: none"> • Although data is limited, no significant bias between the drill methods or differences in intersection widths, was observed. No issues that could significantly affect the resource calculation were identified.
Location of drillholes	<ul style="list-style-type: none"> • Havilah & Pasmaenco's drillhole collar coordinates were surveyed in UTM coordinates using a differential GPS system with an x:y:z accuracy of 20cm:20cm:40cm. • Of Havilah's 60 AC & RC holes, 18 (from hole 36 onwards), were surveyed using a digital multi shot survey camera, at 30 to 50m intervals downhole. • Havilah's 2 diamond holes were surveyed at 30m intervals downhole using a digital multi shot survey camera. • Pasmaenco's AC holes were vertical & were not surveyed. • Pasmaenco's diamond holes were surveyed at 30 to 50m intervals downhole, using Eastman or digital multi shot survey cameras.
Drillhole spacing and distribution	<ul style="list-style-type: none"> • The original drilling by Pasmaenco was completed on 100m spaced sections, approx perpendicular to the strike of the stratigraphy and mineralisation. Initial vertical 100m spaced AC holes along each section were infilled to 50m over the supergene mineralisation. • Pasmaenco's diamond holes mainly targeted the primary mineralisation at depth, down dip & along strike from the initial discovery. The holes were drilled at a dip of -60° to -70° to the west, approx perpendicular (70-80°) to the dip (-40° east) of the stratigraphy & stratabound mineralisation. Several were drilled on the main sections 6522600N & 6522700N, at spacings of 50 to 100m, to a depth of approx 400m down dip from the base of the supergene mineralisation (520m vertically from surface). Similarly oriented single holes were drilled on other 100m spaced sections to the north & south, 150m to 300m down dip from the base of the AC holes & supergene zone. One hole (BEN1051) was drilled approx down dip (-60°) to the east, to test structurally controlled mineralisation targets. • Havilah's AC & RC drilling was aimed at better defining the supergene resource. It essentially infilled Pasmaenco's 100m x 50m pattern of vertical AC holes to produce an approx 50m x 25m pattern over the supergene resource. Most of the holes were steeply dipping at 75° – 80° to the west. A small number were spaced at 40-50m on the 50m infill sections. Some holes are as close as 15m apart. • Resource drilling is predominantly concentrated between 447730E and 448453E and between 6522375N and 6522875N.
Estimating and Reporting of Mineral Resources	
Database integrity	<ul style="list-style-type: none"> • A separate database for the Pasmaenco holes used in the modelling & estimate was produced as a 'cut down' version of Pasmaenco's Benagerie database, which was rebuilt and validated by an independent consultant in 1998 & was subsequently added to. • Havilah's database used in the modelling & estimate was rebuilt and validated in 2010. • Examination of the databases has not revealed any issues of concern that could significantly affect the current resource estimation.
Geological interpretation	<ul style="list-style-type: none"> • The Cu-Au-Mo mineralisation at North Portia is located on the easterly dipping, far north easterly limb of the 'Benagerie Dome', which is a major elongate N-NNE trending, double plunging antiformal structure. • The mineralisation is restricted to & hosted within a distinct 150m thick package of strongly albitised, variably evaporitic & calcareous pelites, with scattered thin carbonates, collectively termed the 'Prospective Sequence' (PS Units 2 - 6). • The 'Footwall Sequence' (Unit 1), generally consists of variably magnetic,



	<p>scapolitic, flaser bedded & 'red rock altered' albitites. The 'Hangingwall Sequence' (Unit 7+), consists largely of variably graphitic pelites, with minor evaporitic & carbonate bearing horizons.</p> <ul style="list-style-type: none"> • In detail, the PS & mineralisation appears to have been disrupted by a number of roughly NS striking subvertical (predom E side up) faults. The Proterozoic basement, which hosts the mineralisation, is overlain by approx 40m of Tertiary age clay of the Namba Fm. plus 20m of Quaternary to Recent sands & clay. • Primary Cu-Au-Mo sulphide mineralisation consisting predominantly of chalcopyrite, pyrite & molybdenite, occurs as two main styles: <ol style="list-style-type: none"> 1). Stratabound replacement style (dominant style) – hosted within the PS, particularly the 'Lower Carbonate Unit' (Unit 2) & Unit 3. May include some bedding parallel vein style. 2). Vein & breccia style (subordinate style)– hosted within & closely assoc with thin quartz-carbonate veins, the main set of which dip to the west, roughly orthogonal to bedding. Some hosted within steeply dipping breccias or faults, some of which might be 'remobilised' feeder structures. • Secondary/supergene Cu-Au-Mo mineralisation is developed in the weathering profile, above the primary mineralisation. The profile consists of a totally oxidised saprolite zone, overlying a non oxidised sulphide bearing saprolite zone, which grades through saprock to fresh rock. The mode of occurrence & mineralogy of the Cu-Au-Mo species in the oxidised zone is unknown. In the non oxidised zone, the supergene sulphides consist predominantly of pyrite & chalcocite, with lesser bornite, chalcopyrite & molybdenite.
Estimation and Modeling Techniques	<ul style="list-style-type: none"> • Polygons and hence triangulations are based on interpretations completed on nominal 50m sections. • Triangulated interpretations were generated for the following domains: +\$20_value, Mo_primary and Mo_secondary. • The dollar value of each assay interval was calculated based on conservative prices of A\$5000 per tonne for Cu & A\$1000 per oz for Au. • The Mo_primary domain outlines the primary Mo sulphide mineralisation, dipping at approx 40° E, using a lower cutoff of 100ppm. • The Mo_secondary domain outlines the supergene Mo mineralisation, with a sub-horizontal distribution, using a lower cutoff of 100ppm. • Triangulated interpretations were also generated for the base of cover, oxidation, saprolite and saprock. • The block model was constructed with parent blocks of 15mE by 15mN by 15mRL with sub blocks available to a minimum of 5mE by 5mN by 5mRL. • Inverse distance was used to estimate Cu, Au and Mo grades and specific gravity separately for all domains and oxidation states. • Up to two estimation passes with increasing search neighbourhood size were run for Cu, Au estimation into the \$20 domain. • The search directions for each estimation was aligned with relevant geological correlation and distances based on drill hole spacing. • 1m assay composites were used with length weighting used in estimation. • A minimum of 4 and maximum of 32 composites were used per estimate.
Moisture	<ul style="list-style-type: none"> • Tonnes have been estimated on a dry basis.



Cut-off parameters	<ul style="list-style-type: none">• No grade cut off parameters have been applied for estimation of Cu or Au. A high grade cut of 5000ppm Mo was used within the constraints of the geological boundaries of the Mo_primary domain to control the distribution of high Mo grades in widely spaced drilling.
Bulk density	<ul style="list-style-type: none">• Density values of 1.72 for oxidised saprolite, 1.89 for unoxidised saprolite, 2.27 for saprock & 2.65 for fresh rock, were assigned to blocks in the corresponding domains in the block model.• Density values for the saprolite were based on 71 measurements (30 ox sap, 41 unox sap, weight in air vs weight in water method) of what is considered to be the same material, in 12 PQ diamond core holes from the Portia Prospect, located several hundred metres along strike to the south.• The density value for saprock was taken to be mid way between the saprolite and fresh rock values, the material being essentially a transition from one to the other.• The density value for fresh rock was taken to be that of what is considered to be exactly the same material at the Kalkaroo Deposit, located approx 60km to the SE.• The only density data available for North Portia was in the form of Pasminco's down hole gamma-gamma compensated density logs of most of their diamond holes, plus a small number of AC holes. These suggest values of approx 2.05 for saprolite in general, 2.4 for saprock & 2.7 for fresh rock. Comparison with these values & those for similar material at Kalkaroo, suggests that the values arrived at for the saprolite at North Portia might be underestimated by 0.1 to 0.2 units, therefore being conservative.
Classification	<ul style="list-style-type: none">• Mineral resources have been classified based on the degree of confidence in the continuity of mineralisation, the quality of the data and the drill hole spacing.• Although the drill hole spacing in the supergene resource is fairly close (25m spacing on 50m sections), the resource has been classified as indicated, because of the apparent inherent variability in the grades, even at this spacing, plus the fact that most of the holes were AC or RC, with difficult drilling conditions and resultant uncertainties in sample quality in some cases.• The dividing surface between the indicated & inferred resources is naturally the base of the saprock, which is the base of the supergene zone/mineralisation and most of the AC (+-RC) holes stopped at or before this surface.• The primary resource (in fresh rock below the base of saprock) has been classified as inferred, because of the wide drill hole spacing and resultant uncertainties in the continuity of the mineralisation. It is also apparent that the mineralisation is probably disrupted by faulting, which has not been fully taken into consideration in the simplified geological model.• The supergene resource equates to the indicated resource.• The primary resource equates to the inferred resource.