

4 November 2022 **ASX Release** 

### DRILL RESULTS FROM PHASE TWO DIAMOND DRILLING AT CALARIE PROJECT

### **HIGHLIGHTS**

- Orange Minerals NL (ASX: OMX) ("Orange" or "the Company") is pleased to announce that it has received assay results from the Phase 2 drilling programme at Calarie.
- Five diamond holes totalling 1,170 metres were completed at Calarie best results received include:
  - 10.6m @ 5.63 g/t Au and 4.6 g/t Ag from 39.1m in OCDD005
    - Including 2.4m @ 15.69g/t Au & 6.7g/t Ag from 45m
  - 2.6m @ 0.76 g/t Au and 0.5g/t Ag from 117.5 m in OCDD001
  - 1.0m @ 0.71 g/t Au from 291.0 in OCDD004
- Results validate outstanding historical results close to surface. The three deeper holes targeting the area below the workings, intersected the same shear zone as identified in the historical shallower holes above, but without significant gold mineralisation. This indicates that the gold is associated with discrete south plunging shoots, that require further work to locate.
- Future exploration work will also focus along strike, where historical exploration results indicate gold mineralisation close to surface.

In December 2021 ten RC holes totalling 1,044m were completed at Calarie - outstanding results received include:

Excellent assay results included:

- 14m @ 3.4g/t Au from 112m in OCRC003,
- 21m @ 4.5g/t Au from 34m in OCRC006,
- 5m @ 13.5g/t Au from 143m in OCRC008,
- 2m @ 5.1g/t Au from 94m in OCRC009.

A Phase 2 diamond drilling programme of five holes totalling 1,170 metres was completed in September 2022 as a follow up to the successful Phase 1 RC drill programme completed at Calarie in December 2021. Drilling commenced in August 2022 and was completed in September 2022.

The drilling was planned to validate historical drill holes and look to extend mineralised zones below the historical workings (see Figure 2).





### **About the Calarie Gold Project**

- Calarie is a mining lease (ML739) and two exploration licences (EL8555, EL8580) that form a 70% earn-in joint venture with Godolphin Resources Limited (see Figure 1).
- The project area is located immediately north of Forbes in Central NSW.
- The Calarie area was an underground gold mine that produced approximately 39,000oz at 22g/t gold from 1896 to 1908.

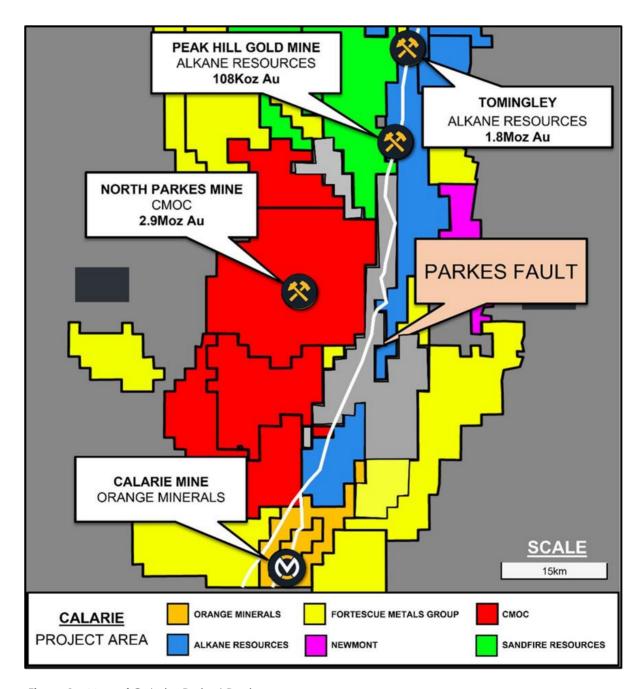


Figure 1 - Map of Calarie- Project Region.



#### **Calarie Geology**

At the Calarie mine, gold mineralisation occurs in the sheared contact (Parkes Fault) between the Late Ordivician to Early Silurian Cotton Formation and the Ordivician North Parkes Volcanic Group. The Cotton Formation consists of black mudstone, siltstones, and sandstones with minor calcareous units. A prominent laminated limestone is associated with the shear. Soft sediment deformation is common with mud breccias of black mudstone in fine grained siltstones. Orogenic – structurally controlled mineralisation at Calarie consists of gold, pyrite, arsenopyrite and magnetite, associated with quartz and carbonate veins, stockworks and breccias. Sericite and silica alteration intensity, pyrite content and degree of fracturing of the sediments all increase towards the shear contact. On the footwall of the shear, the andesite is strongly porphyritic in plagioclase and less porphyritic in pyroxene and FeOx, with chlorite pseudomorphs after olivine. The andesite is strongly chlorite – sericite altered, increasing towards the shear.

Five PQ/HQ diamond holes were drilled in the stage 2 drill program for a total of 1,170m (see Figure 2). Hole OCDD001 intersected a 2.4m wide, historic mine void at 121.8m, with low grade gold mineralisation either side. Hole OCDD005, intersected significant gold mineralisation between 39.1 to 49.7m (see Figure 3). High grade gold is associated with large quartz veins in dilation zones within the Parkes - Forbes fault and was targeted in the historical workings. A section through OCDD005 is displayed in Figure 4.

Three deep drillholes (OCDD002 - 4), targeting the area below the workings, intersected the same shear zone as identified in the historical shallower holes above, but without significant gold mineralisation. This indicates that the gold is not a large sheet of mineralisation but associated with discrete south plunging shoots, that require further review. In addition, further drilling is required to determine the significance of the isolated historical intercept (1m @ 8.2 g/t Au) in hole CALDD001, that intersected the shear at the same depth below the workings, 140m north of OCDD004.

SIGNIFICANT INTERVALS - CALARIE DIAMOND DRILL PROGRAM 0.5g/t Au Cut-off (max 3m internal dilution)					
Hole Id	From (m)	To (m)	Interval (m)	Au (g/t)	
OCDD001	117.5	120.1	2.6	0.76	
OCDD004	291.0	292.0	1.0	0.71	
OCDD005	39.1	49.7	10.6	5.63	
include	45	47.4	2.4	15.69	

**Table 1-** Significant drill results Orange Minerals





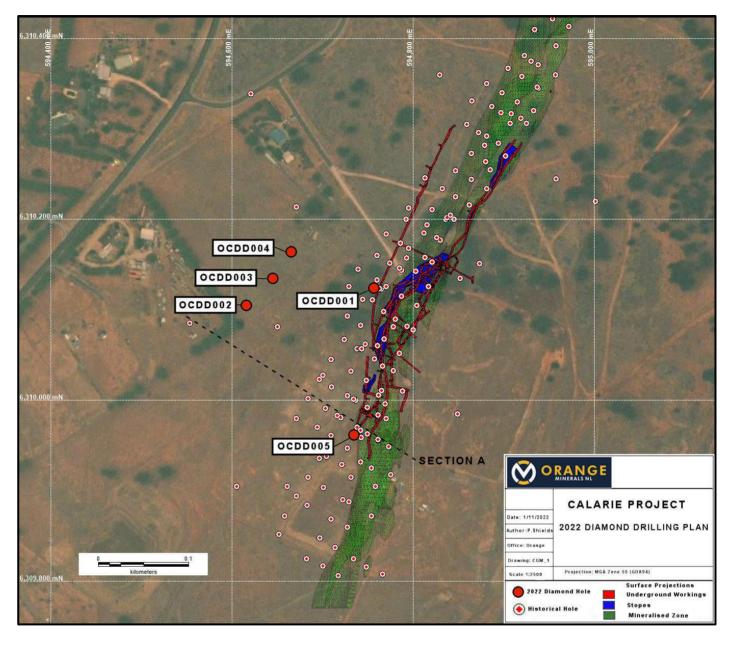


Figure 2 - Calarie- plan showing recent Orange Minerals NL drillhole collars and historic drillholes.





Figure 3 - OCDD005 mineralised zone





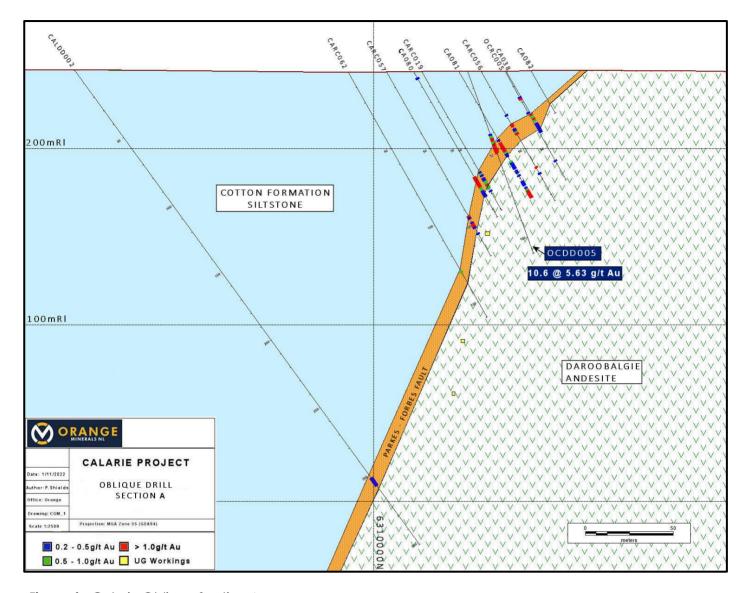


Figure 4 - Calarie Oblique Section A

#### **Future Work**

Using the results from the recent drill programme the ore body model will be updated and an initial resource will be estimated.

The company will also plan exploration programmes to focus on shallow mineralised targets along strike to the historical mine at Calarie.

Geophysics will be used to target favourable structures, along strike to the north of the current drill program area.

This ASX announcement has been authorised for release by the Board of Orange Minerals NL.

-ENDS-





#### **About Orange Minerals NL**

Orange Resources NL is an exploration company listed on the ASX (ASX: OMX) with Australian-based projects in the Lachlan Fold Belt (LFB) of NSW and Eastern Gold Fields of WA, both world-class mineral provinces. The LFB of NSW hosts major mines including Cadia/Ridgeway, North Parkes and Lake Cowal and the tenements in the Eastern Goldfields of WA are close to the Daisy Milano gold mine and Black Cat Resources Majestic Project. The Orange Minerals exploration team plan to rapidly explore its tenement packages with aggressive exploration programmes at its key properties. The company is currently focussing on the Calarie & Wisemans Creek Projects in NSW and the Majestic/Kurnalpi tenements in WA.

#### For further information, please contact: David Greenwood

A: Level 2. Havelock Street West Perth. WA 6005

W: www.orangeminerals.com.au

E: contact@orangeminerals.com.au

T: +61 (08) 6102 2039

#### **Competent Persons Statement**

The information in this report that relates to Exploration Targets, Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Phil Shields, a Competent Person who is a Member of the Australian Institute of Geoscientists. Mr Shields is an employee of Orange Minerals NL and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Shields consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

#### **Forward Statement**

This release includes forward – looking statements which involve a number of risks and uncertainties. These froward looking statements are expressed in good faith and believed to have a reasonable basis. These statements reflect current expectations, intentions or strategies regarding the future and are based on current assumptions. Should one or more of the uncertainties materialize, or should underlying assumptions prove incorrect, actual results may vary from the expectations, intentions and strategies described in this announcement. No obligation is assumed to update forward looking statements if these beliefs or opinions should change.





## **APPENDIX 1: Orange Minerals DD Collar Coordinates**

HOLE_ID	EASTING GDA94	NORTHING GDA94	ELEVATION	AZIMUTH	DIP	Depth
OCDD001	594762	6310123	243	120	-80	151.1
OCDD002	594615	6310105	244	120	-60	316.8
OCDD003	594645	6310135	244	120	-60	290.5
OCDD004	594665	6310165	244	120	-65	299.3
OCDD005	594742	6309967	243	125	-70	111.8

Grid: MGA Zone 55 (GDA94)





# APPENDIX 2: JORC CODE (2012) TABLE 1.0 REPORT

## **Section 1: Sampling Techniques and Data**

Criteria	JORC Code Explanation	Commentary
Sampling Techniques	<ul> <li>Nature and quality of sampling (e.g., cut channels, random chips or specific specialized industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are material to the public report. In cases where 'industry standard' work has been this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1m samples from which 3kg was pulverized to produce a 30g charge for fire assay'). In other cases, more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g., submarine nodules) may warrant disclosure of detailed information.</li> </ul>	A program of 5 diamond holes was completed on the Calarie project, with a total meterage of 1,169.5m. PQ core was drilled as a pre collar to the base of oxidation and the holes finished with HQ core. One hole (OCDD005) was drilled PQ core through the mineralised zone.  Sample intervals were based on geological interpretation and a standard 1m was used outside of areas of visible mineralisation. Only the shear zone and the bottom of the hole was sampled. Industrial standard practices were conducted to ensure a representative sample was obtained. Samples were dispatched to Bureau Veritas accredited laboratory in Adelaide, SA, for analysis for Fire Assay gold and a suite of 17 elements (Ag, As, Al, Ba, Be, Ca, Co, Cu, Fe, K, Mo, Na, Pb, S, Sb, W and Zn). The laboratory has applied a comprehensive QAQC protocol for sample preparation and routine instrument calibration.  Reference material in the form of blanks, duplicates and certified standards were inserted into the batch. Laboratory comparison checks were also completed. No statistically significant lab errors or biasing was reported.  All intervals were geologically and geotechnically logged by an independent consultant geologist at MIME Field Services.  Magnetic susceptibility was recorded for all holes.
Drilling Techniques	<ul> <li>Drill type (e.g., core, reverse circulation, open hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g., core diameter, triple or standard tube, depth of diamond tails, face sampling bit or other type, whether core is orientated and if so, by what method, etc.).</li> </ul>	An Ophir Drilling Sandvik Track mounted diamond rig was used for the drill program. Core from surface was drilled at different hole inclinations between 60° to 80°. Depth of hole varied between 111.8 to 316.8m.





Criteria	JORC Code Explanation	Commentary
Drilling Sampling Recovery	Method of recording and accessing core and chip sample recoveries and results accessed. Measures taken to maximise sample recovery and ensure representative nature of the samples. Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss / gain of fine / coarse material.	Downhole depth was determined by counting the drill rods and run lengths. Core was reconstructed in the trays into continuous lengths and checked against core blocks.  There were minor core loss issues during the drilling in holes OCDD001 and OCDD005 that was interpreted as old workings associated with the historic Calarie mine.
Logging	<ul> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies. Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography. The total length and percentage of the relevant intersections logged.</li> </ul>	Historical RC and diamond core was routinely logged to a suitable standard for defining the geological features including lithology, mineralisation, alteration, etc. The Competent Person considers the quality of the logging for both historical and recent drill programs to be appropriate for the style of mineralisation and sufficient for subsequent mineral resource estimates.
Sampling Techniques	<ul> <li>Nature and quality of sampling (e.g., cut channels, random chips or specific specialized industry standard measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> </ul>	The PQ and HQ core was cut in half with an almonte automatic core saw, with half bagged for assay and the other half archived for reference.  Reference material in the form of blanks, duplicates and certified standards were inserted into the batch. Laboratory comparison checks were also completed. No statistically significant lab errors or biasing was reported.  Two standards from Geostats Pty Ltd (G318-6 and G910-10 with gold values of 2.7 and 0.99 g/t) were used due to the predicted grade of the Calarie mineralisation.



Criteria	JORC Code Explanation	Commentary
Sub Sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry. For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the insitu material collected, including for instance results for field duplicate / second half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	Both PQ and HQ core samples were cut in half on an almonte automatic saw, with half used for assaying and half retained for reference.  Monitoring of results indicated that the sample preparation was acceptable in regard to accuracy, precision and minimization of sample cross contamination.  The sample sizes are appropriate to the grain size of the material been sampled.
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibration factors applied and their derivation, etc.</li> </ul>	All samples were dispatched to Bureau Veritas laboratory in Adelaide for sample preparation. The samples were pulverized to a nominal 95% passing 75 microns. Samples were assayed for 50g Fire Assay (FA001) and Mixed Acid Digest, multiple element analysis with ICP finish for Ag, Al, As, Ba, Be, Ca, Co, Cu, Fe, K, Mo, Na, Pb, S, Sb, W and Zn. All samples were tested for Magnetic Susceptibility.  1:20 samples were analysed in duplicate. Blanks and standard reference material were inserted to gauge assaying accuracy.
Verification of sampling and assaying	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> </ul>	Logged drillholes are reviewed by a Senior geologist. The verification of significant intersections has been reviewed by an independent consultant from MIME Field Services.  No twinning of holes was undertaken.  There was no adjustment to assay data.



Criteria	JORC Code Explanation	Commentary
Location of data points	<ul> <li>Accuracy and quality of surveys used to locate drill holes (collar and down hole surveys), trenches, mine workings and other locations used in Mineral Resource Estimation.</li> <li>Specification of the grid system used. Quality and accuracy of topographic control.</li> </ul>	GDA94, Zone 55 grid system was used. Drill hole collars have been surveyed by DGPS survey. Set up collar azimuths and inclinations were originally established using a compass and clinometer. Downhole surveys were completed by the drill contractor. A Reflex multishot gyroscopic tool was used for downhole shots every 6m.
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results. Whether the data spacing, and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure (s) and classification applied.</li> <li>Whether sample compositing has been applied.</li> </ul>	The previous drillhole spacing at Calarie was approximately 25m along strike and 20m on section and is considered sufficient to understand the spatial distribution of mineralisation for eventual conversion to a Mineral Resource.  The infill drilling by Orange Minerals has endeavored to increase confidence in future estimation work.
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structure is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	The orientation of the drill holes is generally orthogonal to the strike of mineralisation.  The Competent Person considers the orientation of drillholes with respect to the attitude of the lithologies and/or structures hosting mineralisation will be sufficient to support the reporting of a Mineral Resource estimate in the future.
Sample security	The measures taken to ensure sample security	Samples were stored in a secured location prior to dispatch and bags were securely sealed for transportation to the lab. Pulps will be returned from the lab and securely stored.
Audits or reviews	<ul> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	No audits or reviews are understood to have been carried out for any of the previous sampling programs.



# **Section 2: Reporting of Exploration Results**

(Criteria listed in the previous section also apply to this section)

Criteria	JORC Code Explanation	Commentary
Mineral tenement and land tenure status	<ul> <li>Type, reference name / number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a license to operate in the area.</li> </ul>	The Calarie project area is covered by three tenements (EL855, EL8580 and ML739) with an overall area of 135km². The tenements are located directly to the north of the township of Forbes.  Calarie is subject to a Farm In and Joint Venture with Godolphin Resources Ltd to earn up to a 70% interest in EL8555, EL8580 and ML739.  All tenements are in good standing.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	* Lachlan Valley Minerals  ML739 was originally granted in 1979. In 1980, six diamond holes (468.6m) were drilled confirming shallow economic mineralisation. Sampling of the tailings dump returned 5.1g/t Au (slimes) and 2.8g/t Au (sands).  Small scale 600t/wk roaster and CIP plant constructed.  * BHP — Newcrest 1988 — 1991  ML739 was acquired and 4 PLAs are replaced with EL3425. Further 55 RC holes drilled (3584m). In 1989, a costean (80 x 25 x 4m) was excavated through the old Lachlan Mine Shaft for bulk sampling. Low grade gold was returned from the samples.  * Hargraves Resources 1994 - 1995  Limited ground magnetic survey was undertaken in ML739 to determine whether the prospective contact zone between the sediments and Andesite could be identified. Two programs of RC completed (28 holes for a total of 2353m) to test the potential for open cut mineralisation (no hole deeper than 72m from surface). A diamond hole (CARCD001 — 99m) was drilled to confirm results in nearby RC holes with good correlation. A third RC program was completed in 1995 (46 holes — 4049m). Drilling encountered several paleochannels — gold bearing in the upper and lower parts.  In 1995, a 2D undiluted resource estimate (non JORC compliant) was calculated (0.5Mt at a grade between 2.5 and 3.0g/t Au.



		Soil samplingeophysical 2 RC – 456m * Golden Cre	surveys conduct ) completed. oss Resources 20	ground magnetic ed. Nine-hole dril 003 - 2007	ll program			
		* <u>TriAusMin</u> Rehabilitatio * <u>Goodrich I</u>	Ltd 2008 on works on ML7 Resources Ltd (F	nond drill hole CAI 739 arm in with TriAus eneath the Calari	sMin Ltd)	5		
Geology	Deposit type, geological setting, and style of mineralisation.	controlled go trending stru are hosted in / sediment co	old deposits. Go actural zone loca a strongly deform ontact.	Project area is co ld mineralisation of lly known as the F ned Ordovician vo	occurs alor Parkes – Folcanics an	ng an exteorbes belt ad occur c	ensive l	NNE gold deposits
Drill hole information	<ul> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all material drill holes.</li> </ul>		•	30 RC and 28 Diar are tabulated below MGA_Northing		Depth	Dip	MGA_Azi.
	<ul> <li>Easting and northing of the drill hole</li> <li>Elevation or RL of the drill hole collar</li> <li>Dip and azimuth of the hole</li> <li>Down hole length and interception depth</li> <li>Hole length</li> </ul>	OCDD001 OCDD002 OCDD003 OCDD004 OCDD005	594762 594615 594645 594665 594742	6310123 6310105 6310135 6310165 6309967	243 244 244 244 243	151.1 316.8 290.5 299.3 111.8	-80 -60 -60 -65 -70	120 120 120 120 120
Data aggregation methods	In reporting Exploration results, weighting averaging techniques, maximum and / or minimum grade truncations and cut off grades are usually material and should be stated. Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths are reported, there should be stated, and some typical examples of such aggregations should be shown in detail.	No high-gra No metal eq	de cutting was a uivalence has be	on equal 1m or geo pplied to the interden en used. ults has been appli	cepts	tervals.		



Criteria	JORC Code Explanation	Commentary
Diagrams	<ul> <li>Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported. These should include, but not be limited to a plan view of the drill hole collar locations and appropriate sectional views.</li> </ul>	Appropriate diagrams displaying the location of drill holes and section have been included in the release.
Balanced reporting	<ul> <li>Where comprehensive reporting of all Exploration results is not practicable, representative reporting of both low and high grades and/or widths should be practiced avoiding misleading reporting of Exploration results.</li> </ul>	All results received and compiled since previous work are reported in this release.  All results reported on by Orange Minerals are accurate and reflective of the mineralisation system being drilled tested.
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations, geophysical survey results, geochemical survey results, bulk samples – size and method of treatment, metallurgical test results, bulk density, groundwater, geotechnical and rock characteristics, potential deleterious or contaminating substances.	This report relates to drill data reported from the recently completed drill program.  The results and data provided in this announcement add further meaning and understanding to the geological knowledge of the Calarie deposit.
Further work	The nature and scale of planned further work (e.g., tests for lateral or depth extensions or large – scale step out drilling).     Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	This report focuses on a drill program that was primarily designed to evaluate historical drill results at Calarie. Future work by Orange Minerals will involve further exploration along strike and the preparation of an initial JORC compliant Mineral Resource for the deposit.