

14 October 2016

ASX Market Announcements ASX Limited Exchange Centre 20 Bridge Street Sydney NSW 2000



### **Operations Update**

Excelsior Gold Limited (ASX: EXG) ("Excelsior Gold" or the "Company") wishes to provide a market update on the operations and organisational aspects of the Company.

The market has previously been informed that the Company is intending to urgently review its Mineral Resource and Ore Reserve statements and this announcement addresses in particular the Zoroastrian open pit resource and reserve (ASX announcement 30 September 2016 Annual Report).

Since open pit mining commenced in November 2015, there has been increasing evidence that mine production has been below the production estimates from the open pit diluted resource models on which the pit designs were based. The resultant significant shortfall in actual ounces mined and recovered has placed significant pressure on the Company's cash position and its share price.

#### **Resource and Reserve Findings**

An indication of the magnitude of mine production and in pit resource issues in the Zoroastrian Pit was initially recognised in June 2016 when open pit mining had generated an estimated 105,453 tonnes of ore grading 1.40g/t Au for 4,745 contained ounces of gold production versus the reserve predicted 198,600 tonnes of ore grading 1.49g/t Au for 9,490 contained ounces (ASX announcement of 4 July 2016).

As mining has progressed in the Zoroastrian Central Pit and additional detailed drilling and mapping information has become available, it is apparent that the distribution of the gold mineralisation is markedly different to the original geological interpretations. The mineralisation in the main steeply dipping shear structures (Birthday Dream and Royal Mint structures) is less consistent and potentially controlled by flat shears and there is also a previously unrecognised predominance of flatter quartz vein structures over steeply west dipping mineralised shears in sections of the pit. In addition, as noted in an ASX announcement on 13 July 2016, it was determined that "corrupted resource definition modelling data …. provided erroneous mine reconciliation information".

#### **Zoroastrian Mineral Resource**

In July 2016, well-respected, independent external consultants, Cube Consulting were commissioned to re-interpret the Zoroastrian geological model and to incorporate the ongoing detailed production grade control drill information and geological pit mapping into a new mineral resource estimate.

The final Cube report has now been received and a full copy of this report will be available via the Company's website.

Cube concluded that the majority of the mineralisation of economic interest is associated only with the flatter orientated (35-45-degree west dipping) ladder veins located within the previously identified "NNW trending gold bearing lodes delineated and traced over 1400 metres of strike". The NNW trending 'lodes' are now interpreted as mineralised shear zones with anomalous gold grades generally above 0.2 g/t Au and the revised interpretation has a material effect on the estimation strategy. In previous mineral resource estimates by Excelsior Gold in 2013 and 2015 the general interpretation of a steeper (60-degree dipping) albeit discontinuous mineralisation in the major lodes led to an interpolation orientation down these steeper structures. The resultant estimates in both prior mineral resource estimates represent an optimistic grade continuity within the shear zones which is not supported by recent mining evidence.

The reality of the gold distribution in the Central Pit has adversely impacted upon a number of areas, including the Company's ore tonnage forecasts to the Paddington toll treatment facility, gold production and cash flow, fund raising initiatives and general confidence in the Company's operations.

The revised geological interpretation and the Cube Mineral Resource methodology and estimate represent a dramatic shift in the current mineral resource inventory for the Zoroastrian Central Project as well as providing potential new exploration and resource development opportunities.

The Cube Mineral Resource is constrained to a vertical depth of approximately 130 metres (300mRL), depleted for mining to 1 August 2016 and reported within a nominal pit optimisation shell at a A\$2,750 per ounce gold price. The Mineral Resource at a 0.6g/t Au lower cut-off totals combined Measured, Indicated and Inferred resources of

#### 2.138 million tonnes @ 1.62g/t Au for 111,400 ounces

A tabulation of the Zoroastrian Central Mineral Resources remaining as at 1 August 2016 are reported above a nominal 0.6 g/t Au cut-off is shown in Table 1. The material mined as at August 1 2016 has been estimated from the model as 212,000 tonnes at 1.46g/t Au for 9,946 ounces of gold.

Model	Lower Cut- off: g/t Au	Measured Resource			Indicated Resource			Inferred Resource		
		Tonnes (Mt)	Grade g/t Au	Ounces (000' oz)	Tonnes (Mt)	Grade g/t Au	Ounces (000' oz)	Tonnes (Mt)	Grade g/t Au	Ounces (000' oz)
Open Pit	0.6	0.376	1.69	20.5	0.782	1.79	44.9	0.98	1.45	46

Table 1. Zoroastrian Mineral Resource Summary (Cube Consulting – October 2016) (Remaining Mineral Resource Zoroastrian Central Open Pit 1 August 2016)

The Cube Mineral Resource is not directly comparable to the Company's previously stated unconstrained Indicated and Inferred Mineral Resources to a vertical depth of 150 metres of 6.186 million tonnes grading 2.18g/t Au for 433,500 ounces (ASX announcement 6 July 2015) but nevertheless suggests a significant upgrade.

A comparison of the Excelsior Gold Mineral Resource estimate within the 2016 Cube reported pit shell volumes (Table 2) demonstrates the result of the additional close spaced data and the significantly modified geological interpretation.

Model			Lower Cut-off: 0.6g/t Au			
		Tonnes (Mt)	Grade g/t Au	Ounces (000' oz)		
Cube 2016 MRE insitu	Меа	0.376	1.69	20.5		
	Ind	0.782	1.79	44.9		
	Inf	0.98	1.45	46		
2016 MRE mined	Меа	0.212	1.46	10		
2016 Total Estimated		2.353	1.60	121.0		
EXG 2015 MRE	Ind	1.995	2.01	128.8		
	Inf	0.44	2.1	30		
2015 Total Estimated		2.437	2.02	158.4		
2015 – 2016 %		-3%	-21%	-24%		

Table 2. Common Volume Mineral Resource Comparison Cube MRE to EXG 2015MRE 1 August 2016

The new geological interpretation and Cube Zoroastrian open pit resource model has reduced the estimated resource grade by 21% and the contained ounces by 24%.

#### **Zoroastrian Central Ore Reserve**

Using the new Cube Mineral Resource estimate a revised Ore Reserve was derived for the Zoroastrian Central pit based on mine design work completed by Auralia Mining Consulting and Excelsior Gold's mining team.

The open pit mine design studies were based on Whittle optimisation runs conducted on Measured and Indicated Mineral Resources and utilising current site operation mining and processing costs at an Australian Dollar gold price of \$1,570 per ounce. The remaining Ore Reserve in the redesigned Central Pit is summarised in Table 3 below.

	Proved Ore Reserve			Probable Ore Reserve			Total Ore Reserve		
	Tonnes (,000t)	Grade (g/t Au)	Ounces (,000oz)	Tonnes (,000t)	Grade (g/t Au)	Ounces (,000oz)	Tonnes (,000t)	Grade (g/t Au)	Ounces (,000oz)
Zoroastrian Central <sup>1</sup>	0	0.00	0	490	2.1	32.7	490	2.1	32.7

Table 3. Zoroastrian Central Ore Reserve Summary

As a result of the Zoroastrian open pit ore reserve revision, the Central open pit became shallower in the north to reflect the downgrade in mineralisation. The tighter pit design and resultant smaller volumes has enabled some mining equipment to be demobilised with a reduction in mining costs now forecast from October 2016 onwards.

The new Ore Reserve represents a reduction of almost 50% in mined ounces, driven primarily by lower resource grades. Clearly, the downgrade is material, however it will take several months of actual mining and milling before the Company can advise how well the new geological and Ore Reserve models are reconciling with actual mine and mill production. Utilising the new design, the Zoroastrian pit will be completed by June 2017, mining about 490,000 tonnes grading 2.1g/t for approximately 32,700 contained ounces.

EXG has adopted the now accepted practice of reporting resources within a nominal pit shell and in light of outcomes from the Zoroastrian resource and reserve re-modelling, it is logical to review the resource and reserve estimations for all of the other prospects within the Company's leases. It is therefore intended to review all of the known prospects for which resource and reserve estimates have been made and to re-issue the Company's resource and reserve tables. It is hoped that this process can be completed by 31 Dec 2016 at a cost of \$100,000 - \$200,000.

#### **Zoroastrian Resource and Reserve Review Implications**

The substantial under-performance of the Zoroastrian Central open pit reserve has in turn substantially impacted upon the Company's wellbeing over the past six months.

In particular, gold production has been significantly less than expected, thereby adversely impacting upon revenue and cash flow. In terms of working capital, the Company was under-prepared for these outcomes and has had to pursue various sources of funding, largely from a position of weakness.

The Company currently has a committed loan and hedging facility with Macquarie Bank Limited (MBL). The original loan facility is for \$4.5 million and the hedging facility includes a forward sales hedging contract for 28,537 ounces (at \$1,570/oz) and further calls for 19,942 ounces. The current exposure is \$1.32M and 24,211 ounces of forward sales as well as the calls. As with loan and hedging facilities of this nature for junior miners, there are a number of built in clauses to monitor and measure Excelsior Gold's performance and associated trigger and default clauses in the event of under-performance. The Company has been managing a number of default triggers in consultation with MBL due to Excelsior Gold's under-performance in gold production.

Due to the forecast gold production decrease from the Zoroastrian open pit, discussions are currently in progress to reschedule the Company's contracted forward sales and calls obligations within the updated mine plan. In the light of the pending review of other resources and reserves on the Company's leases, it is not clear at this point to what extent there will be additional reserves to mine after the completion of Zoroastrian pit, scheduled for completion prior to the end of June 2017.

In addition, Excelsior Gold has an existing debt and convertible facility with GWR for a total of \$2.25 million. Due to the high level of geological uncertainty during the September 2016 quarter, GWR elected not to convert its \$0.65 million convertible component of this package, meaning that the facility is now a debt only facility, maturing in June 2017.

#### **Mining Operations**

As outlined above, management has already moved to reduce mining costs being incurred by two excavators working on double shift operation. The shrinking of the Zoroastrian open pit design to reflect the now reduced ore tonnes will see a reduction in mining costs from October 2016 as well as allowing more time for selective ore mining. The mining fleet continues to meet production BCM targets.

Whilst reviewing the Zoroastrian geological model, the Royal Mint and Bluey's lodes have been reinterpreted and re-modelled and pit face mapping has been incorporated. During this process, an increased level of knowledge has developed with regard to the narrow, flat lying lodes which occur

between the Royal Mint and Bluey's lodes. The narrow "flats" lodes vary between 0.5cm and 30 centimetres thick and have variable orientation, but can contain very high grades. The challenge for the Company's mining staff is to determine whether these unpredictable, discontinuous flat mineralised structures can be sensibly modelled and selectively mined to provide additional contained ounces over and above the resource and reserve. The Company will provide further information regarding the viability of mining the "flats" once it has undertaken further investigation.

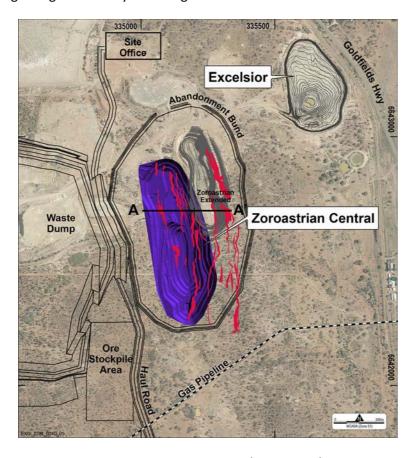


Figure 1. Zoroastrian Central Open Pit Plan

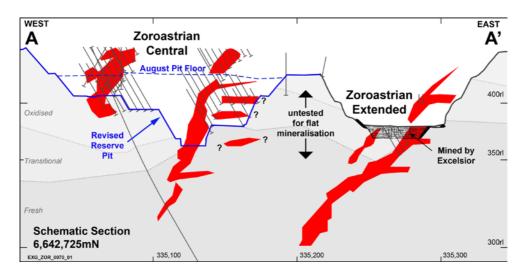


Figure 2. Zoroastrian Central Open Pit Cross Section A-A'



Figure 3. Quartz veins and structures in the Eastern wall between the Royal Mint and Bluey's lodes.

A commonly identified risk to mining operations is that associated with pit wall failures. EXG has experienced small to medium sized geotechnically controlled failures in one of its small starter pits in late 2015 and also in the Zoroastrian Pit in September 2016 which affected the pit ramp and required approximately one week to remedy.

The Company enjoys a constructive working relationship with its mining contractor Hampton Mining and Civil and has four ore stockpiles totalling approximately 65,000 tonnes at an estimated grade of 1.3g/t Au at surface.

#### **Toll Treatment Operations**

As noted in the 2016 Annual Report, EXG believes its unit processing cost structure for toll treatment at Norton's Paddington mill is competitive and such an arrangement enabled the Company to transition into production without the capital cost of constructing its own milling facility.

The agreement with Norton Gold Fields does nevertheless consume a reasonable amount of management time and Excelsior Gold is unable to treat its ore and realise the gold production revenue as quickly as it would if it had its own facility. Understandably, Norton operates its Paddington plant in a manner to optimise its own needs and will treat higher grade material if available from other sources. These factors, coupled with the long process of determining grade, recovery and costs results in delayed settlement and hence adversely affects the timeliness of the Company's cash flow. If, as forecast, the tonnage, grade and predictability of ore supplied to the Paddington process plant improves, so will the cash flow.

#### **Future Exploration**

Exploration activities have by necessity been relatively low key over the past three quarters. Whilst the cash position of the company remains tight, it is not expected that expenditure on exploration activities will change significantly. The Board and management is well aware that the Company's exploration assets are highly regarded and that the future of the Company beyond the Zoroastrian open pit depends on exploration success. Within the current financial constraints, the Company will

review the exploration priorities so that it is well-prepared to resume exploration activities as and when its cash reserves permit.

#### **Cash Flow and Cash Reserves**

Based upon the Company's experience in transitioning from explorer to producer, it was underprepared for disruptions to and/or under-performance against its mine plan from the perspective of availability of working capital.

The Company's cash reserves are considered to be less than ideal. Dialogue between Excelsior Gold's management and MBL will be ongoing as the new Zoroastrian mine plan is implemented and production outcomes are measured against the mine plan forecast. The Company can expect a high level of scrutiny and cash controls from MBL. Ongoing dialogue between MBL and EXG includes negotiation on a rescheduled facility, with details to be advised when negotiations have been concluded. The Company has engaged the services of specialist industry advisor, Noah's Rule to help manage the hedge book going forward.

In terms of responsible risk management, the Board wishes to advise shareholders that there is an elevated risk to the Company in the event of an operational setback which disrupted ore mining and/or processing.

#### **Management and Organisational Matters**

Since the appointment of new directors approximately three weeks ago, the Board has moved quickly in its attempts to implement remedial measures aimed at dealing with the operational and financial issues currently facing the company, to the extent that it can. At its initial Board meeting on the 27 and 28 September, the Board reviewed the current cash position, projected future cash flows and future contractual and hedge commitments to determine what immediate actions could be undertaken to accelerate revenue generation, conserve cash and/or defer expenditure until such time as revenue from mining operations improved.

Whilst mining costs are forecast to decrease in October, there is little room otherwise for cost savings. The Company's staffing levels are low and it is not burdened with unnecessary overheads. Shareholders should be aware that the combined level of Board remuneration is now significantly less than it was under the former regime.

As previously stated (ASX announcement 22 September 2016) the skillset and composition of the Board should reflect the set of circumstances and the size and status of the Company's activities. Accordingly, it is expected that new Board skills will be introduced as and when required. To this end, it is acknowledged that the mix of Board skills and experience should be reviewed regularly. At present and for the foreseeable future, the most critical priority for the current Board is to stabilise production and start to build positive cash flows to create a prosperous future for the Company.

#### **Other Matters**

It is the intention of the Board and management to interact and encourage regular communication with its shareholders and to ensure that all relevant matters are dealt with in an open and transparent manner within the constraints of ASX regulations and Corporations Law. Accordingly, it is the intention of the Board to conduct cost effective shareholder briefing sessions in key locations to reflect the shareholder demographic as soon as practicable.

Shareholders will be advised of the proposed schedule and venues for these shareholder meetings as soon as details are finalised, but the initial round of briefings is expected to occur after the AGM in late November 2016. In the meantime, shareholders are invited to express any questions or

concerns they feel have not been addressed in this announcement by contacting the Company's Acting Managing Director Mr Rowan Johnston , or the Interim Chairman Mr David Hatch via the Company's office.

For further information visit www.excelsiorgold.com.au or contact Excelsior Gold Limited

Rowan Johnston David Hatch
Managing Director Chairman
T: + 61 8 9335 7770 T: +61 8 9335 7770

E: rjohnston@excelsiorgold.com.au E: dhatch@excelsiorgold.com.au

#### Competent Person Statement - Mineral Resources

Information in this announcement that relates to Mineral Resource results is based on information compiled by Mr. Patrick Adams who is a Director of Cube Consulting Pty Ltd. Mr. Adams is a Fellow of the AuslMM (CP) and a Member of The Australian Institute of Geoscientists and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity that he is undertaking, to qualify as Competent Person as defined in the 2012 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr. Adams consents to the inclusion in the document of the information in the form and context in which it appears.

#### Competent Persons Statements - Ore Reserves Zoroastrian Central Open Pit

The information in this Release which relates to the Ore Reserve estimates accurately reflect information prepared by Competent Persons (as defined by the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves). The information in this public statement that relates to the Zoroastrian Central Open Pit Ore Reserve at the Excelsior Gold Kalgoorlie North Gold Project is based on information resulting from Feasibility works carried out by Excelsior Gold Limited. Mr. Randell Ford, who is employed by Excelsior Gold Limited and works at the Zoroastrian Central open pit as the Registered Mine Manager, completed the Ore Reserve estimate for the Zoroastrian Central Open Pit. Mr Ford is a Member of the Australasian Institute of Mining and Metallurgy and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity that he is undertaking to qualify him as a Competent Person as defined in accordance with the 2012 Edition of the Australasian Joint Ore Reserves Committee (JORC). Mr Ford consents to the inclusion in the document of the information in the form and context in which it appears.

#### Qualifying Statement

This release may include forward-looking statements. These forward-looking statements are based on a number of assumptions made by the Company and its consultants in light of experience, current conditions and expectations concerning future events which the Company believes are appropriate in the present circumstances. Forward-looking statements are necessarily subject to risks, uncertainties and other factors, many of which are outside the control of Excelsior Gold, which could cause actual results to differ materially from such statements. The Company makes no undertaking to subsequently update or revise the forward-looking statements made in this release to reflect the circumstances or events after the date of this release.

### JORC Code, 2012 Edition – Table 1 - ZOROASTRIAN

# Section 1 Sampling Techniques and Data (Zoroastrian) (Criteria in this section apply to all succeeding sections)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised 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 done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g 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>	<ul> <li>The mineralization was primarily sampled by Reverse Circulation (RC) and Diamond Core (DC) drilling on nominal 40m x 20m (N x E) grid spacing. The holes were generally drilled towards grid east at varying angles to optimally intersect the mineralized zones.</li> <li>The drilling database consists of historic (pre 2009) and EXG drilling data. The historic data consists of 19 DD and 420 RC holes; EXG drilling consists of 12 DD, 22 Reverse Circulation with diamond tail (RCD), 477 RC and 1390 Reverse Circulation grade control (RCGC) holes.</li> <li>Complete details are un-available for historic drilling.</li> <li>Generally, EXG RC recovered chip samples were collected and passed through a cone splitter.</li> <li>Limited numbers of field duplicates and screen fire assays have been undertaken to support simple representivity.</li> <li>EXG DD core has been sampled by submission of cut half core.</li> <li>All EXG RC drilling was sampled on one metre down hole intervals. The recovered samples were passed through a cone splitter and a nominal 2.5kg – 3.5kg sample was taken to a Kalgoorlie contract laboratory. Samples were oven dried, reduced by riffle splitting to 3kg as required and pulverized in a single stage process to 85% passing 75 µm. The sample is then prepared by standard fire assay techniques with a 50g charge. Approximately 200g of pulp material is returned to EXG for storage and potential assay at a later date. The EXG DC samples were oven dried, crushed to a nominal 10mm by a jaw crusher, reduced by riffle splitting to 3kg as required and pulverized in a single stage process to 85% passing 75 µm. The sample is then prepared by standard fire assay techniques with a 50g charge. Approximately 200g of pulp material is returned to EXG for storage and potential assay at a later date.</li> <li>Due to the presence of coarse gold and arsenopyrite some 150 samples were subjected to a 400g LeachWell® technique with a standard fire assay on the tail. This demonstrated that some of the gold is nuggetty in nature</li></ul>
Drilling techniques	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 oriented and if so, by what method, etc).	<ul> <li>Prior to 2009 19 DC and 420 RC holes were drilled by previous owners over the area. These holes are without documentation of the rig type and capability, core size, sample selection and handling.</li> </ul>
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed      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.	<ul> <li>All EXG RC 1m samples are logged for drilling recovery by a visual estimate and this information is recorded and stored in the drilling database. At least every 10<sup>th</sup> metre is collected in a plastic bag and these are weighed when they are utilized for the collection of field duplicate samples. All samples received by the laboratory are weighed with the data collected and stored in the database.</li> <li>The EXG DC samples are orientated, length measured and compared to core blocks placed in the tray by the drillers, any core loss or other variance from that expected from the core blocks is logged and recorded in the database. Sample loss or gain is reviewed on an ongoing basis and feedback given to the drillers to enable the best representative sample to always be obtained.</li> <li>EXG RC samples are visually logged for moisture content, sample recovery and contamination. This is information is stored in the database. The RC drill system utilizes a face sampling hammer which is industry best practice and the contractor aims to maximize recovery at all times. RC holes are drilled dry whenever practicable to maximize recovery of sample.</li> </ul>

#### The DC drillers use a core barrel and wire line unit to recover the core, they aim to recover all core at all times and adjust their drilling methods and rates to minimise core loss, i.e. different techniques for broken ground to ensure as little core as possible is washed away with drill cuttings. Study of sample recovery vs gold grade does not show any bias towards differing sample recoveries or gold grade. The drilling contractor uses standard industry drilling techniques to ensure minimal loss of any size fraction. Whether core and chip samples have been All EXG RC samples are geologically logged directly into hand-held Logging geologically and geotechnically logged to a Geobank devices. level of detail to support appropriate Mineral Resource estimation, mining All EXG DC is logged for core loss, marked into metre intervals, studies and metallurgical studies. orientated, structurally logged, geotechnically logged and logged with a hand lens with the following parameters recorded where observed: logging is qualitative or regolith, rock type, alteration, mineralization, Whether quantitative in nature. Core (or costean, shearing/foliation and any other features that are present channel, etc) photography. All EXG DC is photographed both wet and dry after logging but before cutting. The total length and percentage of the relevant intersections logged. The entire lengths of EXG RC holes are logged on a 1m interval basis, i.e. 100% of the drilling is logged, and where no sample is returned due to voids (or potentially lost sample) it is logged and recorded as such. Drill core is logged over its entire length and any core loss or voids intersected are recorded. Sub-sampling EXG Exploration results reported for drill core are half core taken from If core, whether cut or sawn and whether techniques quarter, half or all core taken. the right hand side of the core looking down hole. Core is cut with an and sample on-site diamond core saw. preparation If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or All EXG RC samples are put through a cone splitter and the sample dry. is collected in a unique pre-numbered calico sample bag. The moisture content of each sample is recorded in the database. For all sample types, the nature, quality and appropriateness of the sample preparation The EXG RC samples are sorted, oven dried, the entire sample is technique. pulverized in a one stage process to 85% passing 75 $\mu m$ . The bulk pulverized sample is then bagged and approximately 200g extracted Quality control procedures adopted for all by spatula to a numbered paper bag that is used for the 50g fire assay sub-sampling maximise charge. stages to representivity of samples. The EXG DC samples are oven dried, jaw crushed to nominal <10mm, 3.5kg is obtained by riffle splitting and the remainder of the coarse Measures taken to ensure that the reject is bagged while the 3.5kg is pulverized in a one stage process sampling is representative of the in situ material collected, including for instance to 85% passing 75 $\mu m$ . The bulk pulverized sample is then bagged and approximately 200g extracted by spatula to a numbered paper results for field duplicate/second-half sampling. bag that is used for the 50g fire assay charge. EXG RC and DC samples submitted to the laboratory are sorted and Whether sample sizes are appropriate to reconciled against the submission documents. EXG inserts blanks the grain size of the material being sampled. and standards with blanks submitted in sample number sequence at 1 in 50 and standards submitted in sample number sequence at 1 in 20. The laboratory uses their own internal standards of 2 duplicates. 2 replicates, 2 standards, and 1 blank per 50 fire assays. The laboratory also uses barren flushes on the pulveriser. In the field every 10th metre from the bulk sample port on the cone splitter is bagged and placed in order on the ground with other samples. This sample is then used for collection of field duplicates via riffle splitting. RC field duplicate samples are collected after results are received from the original sample assay. Generally, field duplicates are only collected where the original assay result is equal to or greater than 0.1g/t Au. The field duplicates are submitted to the laboratory for the standard assay process. The laboratory is blind to the original sample number. For DC, no core duplicates (i.e. half core) have been collected or submitted. The sample sizes are considered to be appropriate for the type, style, thickness and consistency of mineralization located at this project. The sample size is also appropriate for the sampling methodology employed and the gold grade ranges returned. Quality of The nature, quality and appropriateness of EXG has routinely used local Kalgoorlie Certified Laboratories for all the assaying and laboratory procedures assay data sample preparation and analysis. The most commonly used

### and laboratory tests

- used and whether the technique is considered partial or total.
- For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining analysis including instrument make and
- laboratories have been SGS Australia and Bureau Veritas Australia which has two facilities in Kalgoorlie. No complete details of the sample preparation, analysis or security are available for either the historic AC, DD or RC drilling results in the database.
- The assay method is designed to measure total gold in the sample. The laboratory procedures are appropriate for the testing of gold at

	model, reading times, calibrations factors applied and their derivation, etc.  Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	this project given its mineralization style. The technique involves using a 50g sample charge with a lead flux which is decomposed in a furnace with the prill being totally digested by 2 acids (HCl and HNO3) before measurement of the gold content by an AA machine.  The QC procedures are industry best practice. The laboratory is accredited and uses its own certified reference material. The laboratory has 2 duplicates, 2 replicates, 1 standard and 1 blank per 50 fire assays.  EXG submits blanks at the rate of 1 in 50 samples and certified reference material standards at the rate of 1 in 20 samples in the normal run of sample submission numbers. As part of normal procedures EXG examines all standards and blanks to ensure that they are within tolerances. Additionally, sample size, grind size and field duplicates are examined to ensure no bias to gold grade exists.
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.  The use of twinned holes.  Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.  Discuss any adjustment to assay data.	Consultant geologist, Rick Adams from Cube Consulting and John Harris Geological Services, have inspected drill core and RC chips in the field to verify the correlation of mineralized zones between assay results and lithology/alteration/mineralization.  A number of diamond core holes were drilled throughout the deposit to twin RC holes. These twinned holes returned results comparable to the original holes and were also used to collect geological information and material for metallurgical assessment. A number of RC holes have also been drilled that confirmed results obtained from historical drillholes.  Primary data is sent digitally every 2-3 days from the field to EXG's Database Administrator (DBA). The DBA imports the data into the commercially available and industry accepted DataShed database software. Assay results are merged when received electronically from the laboratory. The responsible geologist reviews the data in the database to ensure that it is correct and has merged properly and that all data has been received and entered. Any variations that are required are recorded permanently in the database.  No adjustments or calibrations were made to any assay data used in
Location of data points	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     Specification of the grid system used      Quality and adequacy of topographic control.	this report.  All drill holes have their collar location recorded from a hand held GPS unit. Downhole surveys are completed every 30m downhole. No detailed down hole surveying information is available for the historic RC or DD drilling.  EXG routinely contracted down hole surveys during the programmes of exploration drilling for each RC and DC drill hole completed using either digital electronic multi-shot tool or north seeking gyro, both of which are maintained by Contractors to manufacturer specifications.  All drill holes and resource estimation use the MGA94, Zone 51 grid system.  The topographic data used was obtained from consultant surveyors and is based on a LiDAR survey flown in 2012. It is adequate for the reporting of Exploration Results and subsequent Mineral Resource estimates.
Data spacing and distribution	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 classifications applied.      Whether sample compositing has been applied.	The nominal exploration drill spacing is 40m x 40m with many E-W cross-sections in-filled to 20m across strike. This has been infilled with variable spacing for Resource estimate purposes to 20 x 20m and with Grade control to 7.5 x 5m (N x E) spacing.  This report is for the reporting of the Mineral Resource Estimate. The drill spacing, spatial distribution and quality of assay results is sufficient to support the JORC classification of material reported within this report and is appropriate for the nature and style of mineralisation being reported.  The majority of holes were sampled at 1m, but when this isn't the case, sample compositing to 1m has been applied.
Orientation of data in relation to geological structure	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.      If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	The majority of drilling is to grid east. The bulk of the mineralized zones are perpendicular to the drilling direction. Structural logging of orientated drill core supports the drilling direction and sampling method.  No drilling orientation and sampling bias has been recognized at this time.
Sample security	The measures taken to ensure sample security.	RC samples are delivered directly from the field to the Kalgoorlie laboratory by EXG personnel on a daily basis with no detours, the

		laboratory then checks the physically received samples against an EXG generated sample submission list and reports back any discrepancies
		Drill core is transported daily directly from the drill site to EXG's secure core processing facility by EXG personnel with no detours. The core is then placed on racks within a secure shed and processed until it requires cutting. Core is then transported directly by EXG's staff to the Kalgoorlie laboratory where it is cut in half by laboratory staff and then sampled by EXG staff. The core is then prepared for assay in Kalgoorlie to the pulverizing stage whereupon the laboratory transports it using a contractor directly to their Perth based assay facility.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	An internal review of sampling techniques and procedures was completed in March 2013. No external or third party audits or reviews have been completed.

## Section 2 Reporting of Exploration Results (Zoroastrian) (Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary						
Mineral tenement and land tenure status	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	tenements held by GPM Resources Pty Ltd, a wholly owned subsidiary of Excelsior Gold Limited.						
	sites, wilderness or national park and	Tenement	Holder	Area (Ha)	Expiry Date			
	environmental settings.	M24/11	GPM Resources	1.80	23/03/2025			
	The security of the tenure held at the time	M24/43	GPM Resources	9.28	15/10/2026			
	of reporting along with any known	M24/99	GPM Resources	190.75	02/12/2028			
	impediments to obtaining a licence to operate in the area.	M24/121	GPM Resources	36.95	02/11/2029			
		M24/135	GPM Resources	17.75	10/06/2029			
			GPM Resources	7.16	21/10/2024			
			GPM Resources	7.04	21/10/2024			
1		M24/871	GPM Resources	9.72	21/10/2024			
I		M24/951	GPM Resources	190.03	16/04/2036			
Exploration	Acknowledgment and appraisal of	is not awar on the EXG • Exploration	the tenements are belie e of any existing royalti Kalgoorlie North Project by other parties has bee	es, duties or othe ct. en reviewed and is	er fees impacting s used as a guide			
done by other parties	exploration by other parties.	to EXG's exploration activities. This includes work by AMAX, Minerals, Aberfoyle and Halycon Group. Previous parties he completed both open pit and underground mining, geophysical discollection and interpretation, soil sampling and drilling.						
Geology	Deposit type, geological setting and style of mineralisation.      The deposit occurs on the eastern limb of a narrow NN structure, the Bardoc-Broad Arrow syncline within the Bardoc-Broad Arrow syncline withi				Bardoc Tectonic formed fault slice			
		The mineralisation in the Zoroastrian area is predominately associated with a complex array of multiple dimensional and variable orientated quartz veins and stock works within the differentiated Zoroastrian Dolerite. In places a surficial 1-2m thick calcrete/lateritic gold bearing horizon and small near surface supergene pods exist.						
		of the Pa Paddington Flag sedime zones up t	ch hosted the sounded to the voice Mount Corlac u	raphic equivalent 1m+oz mine at west by the Black Itramafics. Shear aminated quartz				
		At Zoroastrian slivers of the intruded sequence occur apparently internal to the dolerite throughout the area suggesting a more complex thrust/folding structural system than is readily apparent. Geological and structural interpretation at Zoroastrian is further complicated by contradicting and conflicting mapping and logging of the different units particularly between basalt and dolerite						
Drill hole Information	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:	No explorat drillholes to	ion is being reported in report.	this release there	fore there are no			

	easting and northing of the drill hole collar     elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar     dip and azimuth of the hole
	o down hole length and interception depth
	o hole length.
	If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.
Data aggregation methods	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated.</li> <li>No exploration has been reported in this release, therefore there is no information regarding data aggregation.</li> </ul>
	Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail.
	The assumptions used for any reporting of metal equivalent values should be clearly stated.  The assumptions used for any reporting of metal equivalent values should be clearly stated.
Relationship between mineralisatio n widths and	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>No exploration has been reported in this release, therefore there are no relationships between mineralisation widths and intercept lengths to report. This is not relevant to this report on Mineral Resources and Ore Reserves.</li> </ul>
intercept lengths	If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.
	If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').
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 drill hole collar locations and appropriate sectional views.</li> <li>No exploration has been reported in this release, therefore no exploration diagrams have been produced. This section is not relevant to this report on Mineral Resources and Ore Reserves.</li> </ul>
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 to avoid misleading reporting of Exploration Results.</li> <li>No exploration has been reported in this release, therefore there are no results to report. This section is not relevant to this report on Mineral Resources and Ore Reserves.</li> </ul>
Other substantive exploration data	<ul> <li>Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.</li> <li>No exploration results have been reported in this release. This section is not relevant to this report on Mineral Resources and Ore Reserves.</li> </ul>

Further work	•	The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).	•	No exploration results have been reported in this release. This section is not relevant to this report on Mineral Resources and Ore Reserves.
	•	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.		

### Section 3 Estimation and Reporting of Mineral Resources (Zoroastrian) (Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation	Commentary
Database integrity	Measures taken to ensure that data has not been corrupted by, for example, transcription or keying errors, between its initial collection and its use for Mineral Resource estimation purposes.      Data validation procedures used.	Data is logged in the field directly into the Geobank mobile device. Lab submission sheets are digitally recorded in the same way. Assay data are received from the laboratories in an electronic format and are imported directly into a standard DataShed system. All data have been validated by the EXG Database Administrator and geological management prior to transmission to Cube.  Any errors recorded from the various validation processes are manually checked and correlated back to the original collection of
		data. If necessary, field checks are made to confirm validation issues.
Site visits	Comment on any site visits undertaken by the Competent Person and the outcome of those visits.      If no site visits have been undertaken	<ul> <li>Mr Rick Adams and Mr Mike Millad visited the property from the 4th May 2016 to 5th May 2016 to review the geology, drilling, mining activities and QAQC procedures.</li> </ul>
	indicate why this is the case.	
Geological interpretation	Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.	The geology of the system and the gold distribution is complex. Cube believes that the continuity of mineralisation and volume controls are well established where drilling is at a nominal 20 x 20 m hole spacing.
	Nature of the data used and of any assumptions made.	The use of historical drilling provides a level of uncertainty as the company cannot validate the QAQC data and downhole surrey data. As such throughout the deposit the company has twinned historical
	The effect, if any, of alternative interpretations on Mineral Resource estimation.	holes to confirm results and location.     The close spaced RC grade control drilling and mining pit floor exposure has allowed a detailed re-evaluation of the geological
	The use of geology in guiding and controlling Mineral Resource estimation.	controls on mineralisation by EXG. The new interpretation of these controls materially impacts the estimation of the Mineral Resources and has triggered the need for the re-estimation.
	The factors affecting continuity both of grade and geology.	The result of this revision is that the majority of the mineralisation of economic interest is associated with the flatter orientated (35-45-degree west dipping) ladder veins rather than the previous interpretation of a steeper shear hosted (60-degree dipping) discontinuous mineralisation.
Dimensions	The extent and variability of the Mineral Resource expressed as length (along strike or otherwise), plan width, and depth below surface to the upper and lower limits of the Mineral Resource.	Mineralisation extends 1500m north/south, 470m east/west and 370m in elevation. Mineralisation is present at surface for some lodes with most mineralised lodes starting from within 10m of surface. Lodes are also present on historic pit floor and walls in previous mining activities.
Estimation and modelling techniques	The nature and appropriateness of the estimation technique(s) applied and key assumptions, including treatment of extreme grade values, domaining, interpolation parameters and maximum distance of extrapolation from data points. If a computer assisted estimation method was chosen include a description of computer software and parameters used.	With the advent of close spaced RC grade control drilling and the open pit floor exposure after the commencement of mining a revision of the interpretation of the mineralised structures has been undertaken. This MRE is a result of a revised interpretation from previous work undertaken. The result of this revision is that the majority of the mineralisation of economic interest is associated with the flatter orientated (35-45-degree west dipping) ladder veins rather than the previous interpretation of a steeper shear hosted (60-degree dipping) discontinuous mineralisation.
	The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.	Cube has used 3DM wireframes to constrain the mineralised shear zones, with the most significant shear interpretation (Domain 100) being completed by EXG site geologists, been based on pit floor mapping, and observation, ore mark-outs and the close spaced RCGC drilling at spacing's of 7.5m N x 5m E-W.
	The assumptions made regarding recovery of by-products.  Estimation of deleterious elements or other non-grade variables of economic	All other lodes have been reviewed and adjusted by Cube on a sectional basis using the available exploration and RCGC drilling data on variable spacing ranging from 7.5 x 5m to 20 x 20m to 40 x 40m (N x E-W).
	significance (e.g. sulphur for acid mine drainage characterization).	Drill intervals falling within the wire framed estimation domains were coded in the database. Composites of gold assay values were then

generated using the Surpac "best-fit" method. On the basis of sample In the case of block model interpolation, the size, selectivity assumption (2 EW x 5 NS x 2.5mRL) and selected block size in relation to the average sample estimation methodology, Cube have chosen to use 1m down hole spacing and the search employed. composites for this estimation. Any assumptions behind modelling of It was evident that some of the estimation domains contained extreme selective mining units. outlier gold values. The highly positively skewed gold distributions mean that conventional linear estimation methods, such as Ordinary Kriging ("OK") are very likely to produce over-smoothed block grade estimates. For this reason, it was decided to undertake grade estimation using the non-linear Localised Uniform Conditioning method, backed up by geostatistical simulation. assumptions Anv about correlation between variables. The following criteria were considered when choosing gold grade top Description of how the geological interpretation was used to control the The coherence and stability of the upper tail of the gold grade resource estimates. distribution: Visual inspection of the spatial location of outlier values; Discussion of basis for using or not using Sensitivity tests to gauge the effect of various top cuts on mean grade cutting or capping. Consideration of any information pertaining to the reconciliation of the Zoroastrian grade control model to results from the sampling of ore batches at the Norton sampling plant. The The process of validation, the checking estimation domains used for this resource update are process used, the comparison of model substantially similar to those used for grade control modelling in data to drill hole data, and use of the Zoroastrian Central pit. reconciliation data if available. The statistics show that in some cases there is a large reduction in mean grade and variability following top cutting. This is due to the elimination of the disproportionate effect of extreme outlier gold grade values. It should be noted that the difficulties posed by these extreme outliers significantly increases the inherent risk in the gold grade estimates. The LUC estimates were implemented using the Isatis® software package before being transferred into a Surpac  $^{\text{TM}}$  block model. No consideration has been made to by-products. Two check estimates have been undertaken by Cube as validation steps. The first is a Comparison of an OK grade control model, based only on the tight 5mE x 7.5mN grade control drilling, to an LUC model undertaken using only the resource drill data. Results indicate that the LUC model based on exploration data reconciles to within 5% of contained metal at a 0.6g/t Au cut-off. The second check estimate was in the form of a simulation study on a global basis the LUC outcome reconciled to within 6%, tonnes, grade and metal within the pit life. Block size for gold grade estimation was chosen in consultation with EXG and with due regard to data spacing, orebody geometry, and practical mining considerations. The estimation panel size used was 8mE x 15mE x 10mRL. An SMU block size of 2mE x 5mN x 2.5mRL was chosen (no rotation) for use in the localisation process. This SMU block size corresponds exactly to the current block size for grade control modelling, conforms to the mining flitch height and is elongated in the same direction (north-south axis) as the trend of the lodes at Zoroastrian Central. While the data spacing in areas other than the grade control drilled volume would be considered too wide for such a small block size if conventional linear estimation methods were used, Cube has used the LUC method, which is intended specifically for distribution the grade smaller Whilst the ore is associated with arsenopyrite, assay data and metallurgical test work indicate this does not affect recoveries. No other deleterious elements have been identified. Moisture Whether the tonnages are estimated on a Tonnages were based on a dry basis. dry basis or with natural moisture, and the method of determination of the moisture content. Cut-off The basis of the adopted cut-off grade(s) or The selection of mineralised domains has used geological factors parameters quality parameters applied. such a logged quartz and sulphides in conjunction with a 0.2 to 0.3g/t Au cut off which represents the mineralised shear in all modelled domains. The MR has been reported above a 0.6g/t Au cut-off. This has been chosen to allow the application of modifying factors for the estimation of Mineral Reserves which indicate an economic cut-off of 0.9 to 1g/t Mining possible Assumptions made regarding This MRE has been undertaken on the assumption of open pit mining factors or methods, methods, the selection of SMU size was based on the scale of mining minimum assumptions dimensions and internal (or, if applicable, equipment currently in use at Zoroastrian. external) mining dilution. It is always

Metallurgical	necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential mining methods, but the assumptions made regarding mining methods and parameters when estimating Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the mining assumptions made.	The selection of mineralised domains has used geological factors
factors or assumptions	regarding metallurgical amenability. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider potential metallurgical methods, but the assumptions regarding metallurgical treatment processes and parameters made when reporting Mineral Resources may not always be rigorous. Where this is the case, this should be reported with an explanation of the basis of the metallurgical assumptions made.	such a logged quartz and sulphides in conjunction with a 0.2 to 0.3g/t Au cut off which represents the mineralised shear in all modelled domains.
Environment al factors or assumptions	Assumptions made regarding possible waste and process residue disposal options. It is always necessary as part of the process of determining reasonable prospects for eventual economic extraction to consider the potential environmental impacts of the mining and processing operation. While at this stage the determination of potential environmental impacts, particularly for a greenfields project, may not always be well advanced, the status of early consideration of these potential environmental impacts should be reported. Where these aspects have not been considered this should be reported with an explanation of the environmental assumptions made.	There are no environmental issues exist concerning the extraction or disposal of waste or tailing material.
Bulk density	Whether assumed or determined. If assumed, the basis for the assumptions. If determined, the method used, whether wet or dry, the frequency of the measurements, the nature, size and representativeness of the samples.  The bulk density for bulk material must have been measured by methods that	There are two sources of experimental bulk density data. The first are the results of systematically collected DD core measurements and the second were bulk in-pit density determinations gathered by the mining staff. The DD core results provide a source of competent rock bulk density data however the data lacks any representative data for less competent oxide and transitional weathered rock. The in-pit data represents an attempt to measure the densities of the less competent material.
	adequately account for void spaces (vugs, porosity, etc), moisture and differences between rock and alteration zones within the deposit.  • Discuss assumptions for bulk density estimates used in the evaluation process of the different materials.	• A total of 103 determinations have been made from 13 EXD DD holes. Determinations were made using two methods – for 5 holes the densities were determined using a down hole probe, the Auslog A659 Caliper Tool, the balance were selected core sent to the Genalysis Laboratory in Kalgoorlie where specific gravity was determined by gravimetric technique. The majority of these data were taken on fresh dolerite core, with a small number of oxidised and transitional dolerite core results. The average depth of these determinations is 104m downhole.
		<ul> <li>A total of 51 in-pit determinations have been made at the 422.5m, 425m and 430m pit floor RLs, at surveyed locations within 7 high and low grade ore mark-out blocks. The RLs of these determinations places them within the transitional weathering profile.</li> </ul>
		<ul> <li>On balance Cube believe that there are sufficient data to allow the assignment of average values to the MRE block model but not enough to allow a spatially representative estimation of bulk density. Cube have used assumed bulk density values based on the interpreted weathering surfaces.</li> </ul>
Classification	The basis for the classification of the Mineral Resources into varying confidence categories.  Whether appropriate account has been taken of all relevant factors (i.e. relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data).	The geological model and continuity of the mineralisation is currently well understood due to the RCGC drilling and mining exposure of the mineralised lodes on the pit floor. The MRE has been validated by "ground truth" methods whereby estimates using only resource exploration drilling on a 20x20m collar spacing has been compared to a volume estimated by close spaced RCGC drilling. The results of this comparison confirm that the deeper MR areas estimated outside the grade control volumes can be expected to be representative of what will be defined for mining by the RCGC data to within 10% contained metal.

	•	Whether the result appropriately reflects the Competent Person's view of the deposit.	•	The Mineral Resource estimate appropriately reflects the view of the Competent Person
Audits or reviews	•	The results of any audits or reviews of Mineral Resource estimates.	•	No independent audits or reviews have been undertaken on the Aug 2016 MRE
Discussion of relative accuracy/ confidence	•	Where appropriate a statement of the relative accuracy and confidence level in the Mineral Resource estimate using an approach or procedure deemed appropriate by the Competent Person. For example, the application of statistical or geostatistical procedures to quantify the relative accuracy of the resource within stated confidence limits, or, if such an approach is not deemed appropriate, a qualitative discussion of the factors that could affect the relative accuracy and confidence of the estimate.  The statement should specify whether it relates to global or local estimates, and, if local, state the relevant tonnages, which should be relevant to technical and economic evaluation. Documentation should include assumptions made and the procedures used.  These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.	•	Simulation methodology has been used to quantify potential variations in the grade, tonnes and metal of portions of the estimate. The simulated outcomes at a 0.8g/t Au cut-off demonstrate that probable variations in grade (+-4.2%), tonnes (+-3.7%) and metal (+-7.1%) are within reasonable expectations for moderately high confidence. This relative accuracy summarised relates to a global mineral resource estimate of grade and tonnes within the potential pit design.  The relative accuracy of the Mineral Resource estimate is reflected in the reporting of the Mineral Resource in accordance with the guidelines of the 2012 JORC Code.  The significant amount of production (+200kt) and geological information available from historical mining production data allows for a high degree of confidence in geological, mining and milling parameters. Grade and geological continuity can be estimated to a degree of accuracy high enough to allow for a proportion of the resource to be classified as Measured, Indicated or Inferred where appropriate.  The block model estimate is a local resource estimate which has block sizes chosen at the expected "SMU" selection size.  Reconciliation between EXG mining production and the depleted resource within the Aug 1 pit demonstrates a close (less than +-10%) correlation in contained ounces.

# Section 4 Estimation and Reporting of Ore Reserves (Zoroastrian) (Criteria listed in section 1, and where relevant in section 2, also apply to this section.)

Criteria	JORC Code explanation						Commentary								
Mineral Resource estimate for conversion to Ore Reserves	Description of the Mineral Resource estimate used as a basis for the conversion to an Ore Reserve.						The Mineral Resources for the Zoroastrian deposit have been estimated by Mr Rick Adams of Cube Consulting (Cube). These Mineral Resources are inclusive of the area referred to as the Zoroastrian Central Open Pit. They are prepared within the guidelines of the 2012 JORC Code.								
	Lower Cut- MODEL off: Measured g/t Au						Indicated	Inferred			Total				
			Tonnes (Mt)	Grade g/t Au	Ounces (000° oz)	Tonne: (Mt)	s Grade g/t Au	Ounces (000° oz)	Tonnes (Mt)	Grade g/t Au	Ounces (000° oz)	Tonnes (Mt)	Grade g/t Au	Oun (000°	
	Open Pit	0.6	0.376	1.69	20.5	0.782	1.79	44.9	0.98	1.45	46	2.138	1.62	111.	.4
	Res	ar statem ources a usive of, t	re repor	ted addi	itional to		The Ore Reserves are contained within the Mineral Resources.      Proved Ore Reserve   Probable Ore Reserve   Total Ore R								
			Tonnes	Grade	Ounces To	onnes Grad	de Ounces	Tonnes	Grade	Ounces					
							Zoroastrian Central <sup>1</sup>	(,000t) 0	(g/t Au) 0.00		000t) (g/t A 490 2.1		(,000t) 490	(g/t Au) 2.1	(,000oz) 32.7
				Please note, some errors may exist due to rounding											
Site visits	the (	Comment on any site visits undertaken by the Competent Person and the outcome of those visits.						The Competent Person, Mr Randell Ford, works at the Zoroastrian Central open pit as the Registered Mine Manager.							
	If no site visits have been undertaken indicate why this is the case														
Study status	The type and level of study undertaken to enable Mineral Resources to be converted to Ore Reserves.						Mining is in progress at the Zoroastrian Central open pit.								
	The Code requires that a study to at least Pre-Feasibility Study level has been undertaken to convert Mineral Resources to Ore Reserves. Such studies will have been carried out and will have determined a mine plan that is technically achievable						The mining methods, design layouts, production performance and cost profiles used in preparing these Mineral Reserve estimates reflect this experience and known costs. Estimation of Reserves is considered to be at a higher level than a Feasibility Study								

	and economically viable, and that material Modifying Factors have been considered.	
Cut-off parameters	The basis of the cut-off grade(s) or quality parameters applied.	Cut-off grades used were based upon known economic costs from the current mining of the Zoroastrian central open pit.  Open Pit Reserves are based on a nominal 1.0g/t Au lower cut-off grade.  No changes to the current mining fleet currently used are expected.
Mining factors or assumptions	<ul> <li>The method and assumptions used as reported in the Pre-Feasibility or Feasibility Study to convert the Mineral Resource to an Ore Reserve (i.e. either by application of appropriate factors by optimisation or by preliminary or detailed design).</li> <li>The choice, nature and appropriateness of the selected mining method(s) and other mining parameters including associated design issues such as pre-strip, access, etc.</li> <li>The assumptions made regarding geotechnical parameters (e.g. pit slopes, stope sizes, etc.), grade control and pre-production drilling.</li> <li>The major assumptions made and Mineral Resource model used for pit and stope optimisation (if appropriate).</li> <li>The mining dilution factors used.</li> <li>The mining recovery factors used.</li> <li>Any minimum mining widths used.</li> <li>The manner in which Inferred Mineral Resources are utilised in mining studies and the sensitivity of the outcome to their inclusion.</li> <li>The infrastructure requirements of the</li> </ul>	optimize Mineral Resources to Ore Reserves within Zoroastrian Central based on the current mining.  Standard planning processes of pit optimization, mine design and scheduling using known unit costs were applied in compiling Ore Reserves.  The final calculation of the Ore Reserve figures was performed using the Geovia Surpac™ software suite.  The selected method was open cut mining.
Metallurgical factors or	selected mining methods.      The metallurgical process proposed and the appropriateness of that process to the	The planned treatment of Zoroastrian Central Open Pit ore is at the Paddington processing facility, a conventional 3.5Mtpa CIL plant
assumptions	<ul> <li>style of mineralisation.</li> <li>Whether the metallurgical process is well-tested technology or novel in nature.</li> <li>The nature, amount and representativeness of metallurgical test work undertaken, the nature of the metallurgical domaining applied and the corresponding metallurgical recovery factors applied.</li> <li>Any assumptions or allowances made for deleterious elements.</li> <li>The existence of any bulk sample or pilot scale test work and the degree to which such samples are considered representative of the orebody as a whole.</li> <li>For minerals that are defined by a specification, has the ore reserve estimation been based on the appropriate mineralogy to meet the specifications?</li> </ul>	and is currently being used for ore from the Zoroastrian Central open pit.
Environment al	The status of studies of potential environmental impacts of the mining and processing operation. Details of waste rock characterisation and the consideration of	Environmental approvals have been obtained for the mining of the Zoroastrian Central open pit from all necessary government authorities along with mining approval to extract the ore using open pit mining methods.

	potential sites, status of design option considered and, where applicable, the status of approvals for process residu storage and waste dumps should be reported.	include flora and fauna surveys, existing land disturbance surveys, waste rock sampling, soil analysis, hydrology, Aboriginal heritage
Infrastructure	The existence of appropriate infrastructural availability of land for plant development power, water, transportation (particularly fulk commodities), labout accommodation; or the ease with which the infrastructure can be provided, accessed.	Mining Centre, most recently mined by Aberfoyle Gold Pty Ltd between 1987 and 1991.  Prior cleared land, dumps, open pits and underground workings exist
Costs	<ul> <li>The derivation of, or assumptions made regarding projected capital costs in the study.</li> <li>The methodology used to estimate operating costs.</li> </ul>	carried out by mining contractors
	Allowances made for the content deleterious elements	
	The source of exchange rates used in the study.	
	<ul> <li>Derivation of transportation charges.</li> <li>The basis for forecasting or source</li> </ul>	Ore haulage transportation charges were applied. The charges reflect the costs currently incurred by active mining and transport of the Zoroastrian Central open pit ore.  Treatment and refining charges are based on current costs associated.
	treatment and refining charges, penaltie for failure to meet specification, etc.	
	The allowances made for royalties payable both Government and private.	Allowances were made for WA State government royalties; 2.5% of the sale price was reduced as a 'sell cost' upfront during the optimisation works.
Revenue factors	<ul> <li>The derivation of, or assumptions made regarding revenue factors including heat grade, metal or commodity price(exchange rates, transportation at treatment charges, penalties, net smelter returns, etc.</li> <li>The derivation of assumptions made</li> </ul>	<ul> <li>applied Modifying Factors as described above.</li> <li>An assumed base gold price of A\$1,570 per gold ounce was applied to the final study. No doré transport or refining costs were applied.</li> <li>No revenue has been allocated to any possible economically beneficial</li> </ul>
	metal or commodity price(s), for the principal metals, minerals and co-product	ne
Market assessment	<ul> <li>The demand, supply and stock situation for the particular commodity, consumption trends and factors likely to affect supply and demand into the future.</li> <li>A customer and competitor analysis along with the identification of likely marked windows for the product.</li> <li>Price and volume forecasts and the base for these forecasts.</li> <li>For industrial minerals the customes specification, testing and acceptance requirements prior to a supply contract.</li> </ul>	rising in the medium to longer term worldwide but the gold price is variable and affected by many factors – as a safe-haven reflecting geopolitical factors, demand for jewellery and as part of many countries' currency reserves and thus subject to fluctuations, due principally to market sentiment.  Payment will be made based on the value of the contained gold in each ore parcel (Recovered Gold Credits) by Norton Gold Fields (NGF) based on the Gold Recovery Statement derived from the detailed ore stockpiling, sampling and Grade Determination Procedure. NGF will
		The gold sell price used for the Zoroastrian Central open pit works was A\$1,570/oz.
Economic	<ul> <li>The inputs to the economic analysis produce the net present value (NPV) in the study, the source and confidence of these economic inputs including estimate inflation, discount rate, etc.</li> <li>NPV ranges and sensitivity to variations</li> </ul>	mining, geology, processing and administration. A discount rate of 10% was applied to the optimisation works.  • Sensitivities to existing unit costs, were carried out to establish the
Social	the significant assumptions and inputs.     The status of agreements with keeping and the status of agreements.	viability of the Zoroastrian Central Ore Reserves.   All key stakeholder agreements, including Native title and Pastoral
	stakeholders and matters leading to soci licence to operate.	Lease holder agreements are in place. The Company has close working relationships with communities and key stakeholders surrounding the Project.
Other	<ul> <li>To the extent relevant, the impact of the following on the project and/or on the</li> </ul>	

estimation and classification of the Ore affect the Ore Reserves specific to the area. Reserves. Any identified material naturally occurring There are no known significant naturally occurring risks to the project. risks. Under the terms of the Ore Treatment Agreement between Paddington Gold Pty Ltd (a wholly owned subsidiary of Norton Gold Fields Limited) The status of material legal agreements and marketing arrangements. and GPM Resources Pty Ltd (GPM) (a wholly owned subsidiary of Excelsior Gold Limited), dated 13 October 2015, Norton agrees to process a minimum of 500,000 tonnes of ore per annum from the Kalgoorlie North Gold Project over a period of up to 10 years. The Zoroastrian project falls under this agreement. Excelsior Gold will be responsible for all of the mining operations whilst Norton will be responsible for haulage and milling of the ore. All current deposits are located on granted Mining Leases and all necessary government approvals are in place. The status of governmental agreements and approvals critical to the viability of the project, such as mineral tenement status, and government and statutory approvals. There must be reasonable grounds to expect that all necessary government approvals will be received within the timeframes anticipated in the Pre-Feasibility or Feasibility study. Highlight and discuss the materiality of any unresolved matter that is dependent on a third party on which extraction of the reserve is contingent. Classification The basis for the classification of the Ore Measured Mineral Resources have been converted to Probable Ore Reserves into varying confidence Reserves. Indicated Mineral Resources have been converted to Probable Ore Reserves. categories. Whether the result appropriately reflects The estimated Zoroastrian Central Open Pit Ore Reserves are, in the the Competent Person's view of the opinion of the Competent Person, appropriate for this style of deposit. deposit. Probable Ore Reserves were derived from Measured and Indicated The proportion of Probable Ore Reserves Mineral Resources, they comprise approximately 100% of the Ore that have been derived from Measured Reserve ounces. Mineral Resources (if any). Additional ore to be mined following further drilling within the pit is expected from within Inferred Resources but is not included within the JORC Reserve estimate Audits or The results of any audits or reviews of Ore The Ore Reserve estimate was completed by Excelsior Gold Limited reviews Reserve estimates. with internal checks completed. No external audit of the reserve estimate was completed. Discussion of Where appropriate a statement of the The Ore Reserve is considered robust given the existing mining, plant relative relative accuracy and confidence level in and equipment currently in use on site, the established unit costs accuracy/ the Ore Reserve estimate using an available and the personnel team on site as well as in Perth are now confidence approach or procedure familiar with mining and processing the ore whose characteristics have deemed appropriate by the Competent Person. For been established. example, the application of statistical or The relative accuracy of the estimate is reflected in the reporting of the geostatistical procedures to quantify the Ore Reserves as per the guidelines re: modifying factors, study levels relative accuracy of the reserve within and Competent Persons contained in the JORC 2012 Code. stated confidence limits, or, if such an The Ore Reserves are considered robust on a local scale for material approach is not deemed appropriate, a classified as Probable qualitative discussion of the factors which The Zoroastrian Central lodes are currently being mined and is could affect the relative accuracy and expected that the remaining Zoroastrian Central lodes are of similar confidence of the estimate. geological characteristics which lend confidence to the accuracy of The statement should specify whether it vein tenor, mining recovery and treatment plant recoveries and the relates to global or local estimates, and, if departmental costs used in the estimation of Ore Reserves. local, state the relevant tonnages, which Sensitivity studies were carried out. Standard linear deviations were should be relevant to technical and economic evaluation. Documentation observed. The project is most susceptible to fluctuations in gold price. should include assumptions made and the procedures used. Accuracy and confidence discussions should extend to specific discussions of any applied Modifying Factors that may have a material impact on Ore Reserve viability, or for which there are remaining areas of uncertainty at the current study stage. It is recognised that this may not be possible or appropriate in all circumstances. These statements of relative accuracy and confidence of the estimate should be compared with production data, where available.