Matsa Resources Limited

MATSA RESOURCES

LIMITED

ABN 48 106 732 487

ASX Announcement   **18 January 2018**

Maiden Gold Resource of 26,300oz Au

Red Dog Gold Project

Highlights

- *Maiden Red Dog Gold Mineral Resource estimate totals 368,000t at 2.2g/t for 26,300oz Au. Matsa owns 100% of Red Dog.*

- *94% of the gold resource estimate is in the Indicated Category*

- *Red Dog is a flat lying gold deposit starting only 2 metres from surface*

- *Optimisation of resource, metallurgical assessments and mining studies are underway targeting commencement of mining activities early in the 2nd half of 2018*

- *Native Vegetation Clearing Application already submitted to the department of Mining*

- *The Red Dog gold project presents a further potential near term mining opportunity for Matsa. Its close proximity to Matsa's Lake Carey/Red October gold projects will allow existing infrastructure and accommodation at Red October to be utilised*

CORPORATE SUMMARY

Executive Chairman

Paul Poli

Director

Frank Sibbel

Director & Company Secretary

Andrew Chapman

Shares on Issue

172.38 million

Unlisted Options

13.7 million @ $0.25 - $0.30

Top 20 shareholders

Hold 51.56%

Share Price on 17th January 2018

20 cents

Market Capitalisation

$34.48 million

Matsa Resources Limited ("Matsa" or "the Company" ASX: MAT) is pleased to advise a JORC 2012 Code compliant mineral resource has been completed at its 100% owned Red Dog project, located 25km west of the Company's Fortitude gold project where trial mining is underway.

The Red Dog Mineral Resource estimate totals 368,000t at 2.2g/t for 26,300oz Au with the majority of ounces (94%) in the Indicated Category (Table 1 and Figure 1). The resource estimate is reported at a 0.5g.t Au lower cut-off and the estimate has not been constrained within a resource pit shell.

Material	Indicated			Inferred			Total		
	Tonnes t	Grade g/t	Gold ounces	Tonnes t	Grade g/t	Gold ounces	Tonnes t	Grade g/t	Gold ounces
Oxide	2,000	1.3	100	2,000	0.9	100	**5,000**	**1.1**	**200**
Transitional/Fresh	330,000	2.3	24,700	33,000	1.4	1,500	**363,000**	**2.2**	**26,200**
Total	**333,000**	**2.3**	**24,800**	**35,000**	**1.4**	**1,500**	**368,000**	**2.2**	**26,300**

Table 1: Red Dog Mineral Resource as at January 2018 – reported above an Au cut-off grade of 0.5g/t Au

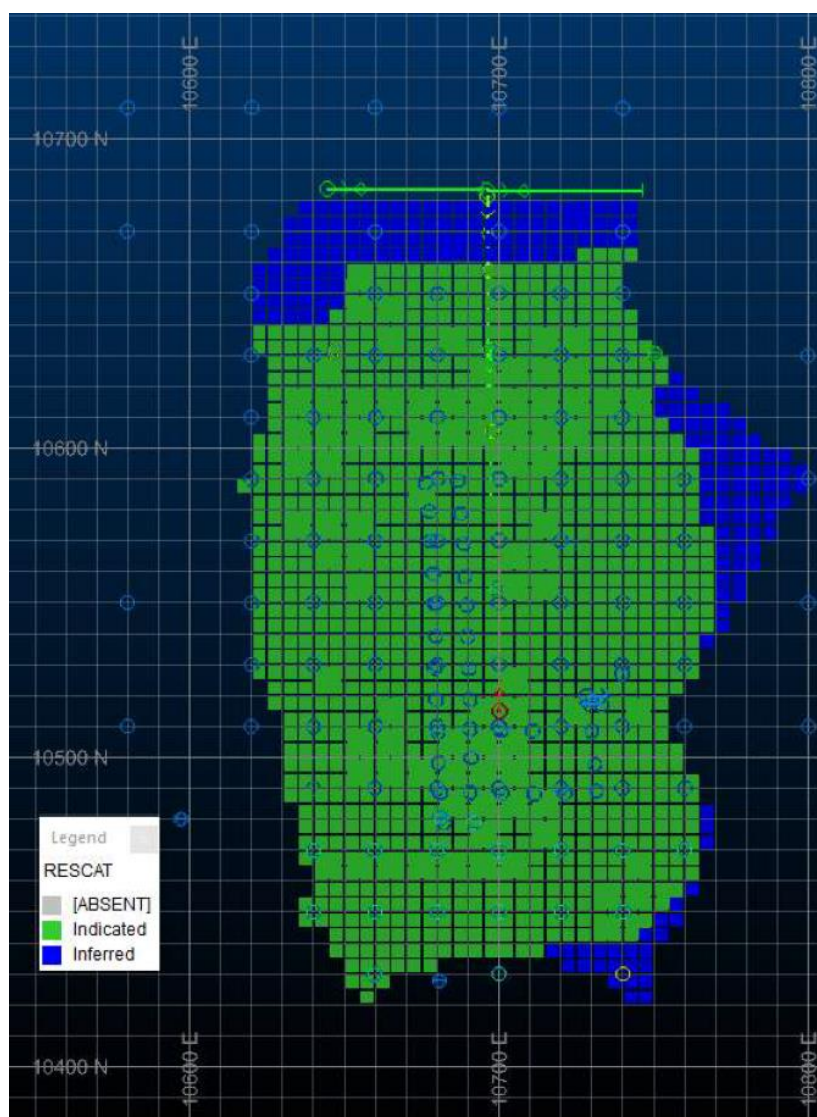Note: Totals in Table 1 may not sum or weight average due to rounding.

Figure 2: Red Dog mineral classification

Matsa recently completed an RC program at Red Dog with results including *(refer MAT announcement to ASX 1st December, 2017)*:

- **6m at 155 g/t Au** from 6m   (17RDRC077)
    incl. **1m at 921 g/t Au** from 7m
- 11m at 2.59 g/t Au from 5m   (17RDRC073)
- 14m at 1.97 g/t Au from 3m   (17RDRC082)
- 6m at 4.57 g/t Au from 13m   (17RDRC029)
- 8m at 3.23 g/t Au from 22m   (17RDRC087)
- 8m at 3.11 g/t Au from 4m   (17RDRC032)
- 10m at 2.31 g/t Au from 8m   (17RDRC081)
- 8m at 2.56 g/t Au from 11m   (17RDRC072)

This drilling along with historical RC data was used to generate the maiden Mineral Resource Estimate. The Mineral Resource was estimated by Optiro Ltd.

A mineralisation wireframe was created at a cut-off grade of 0.5 g/t Au with a minimum thickness of 2 metres, based on mineralisation strings supplied by Matsa. The gold resource was estimated into a three-dimensional block model by ordinary kriging (OK) using dynamic anisotropy to account for the undulating nature of the ore body (Figure 2).
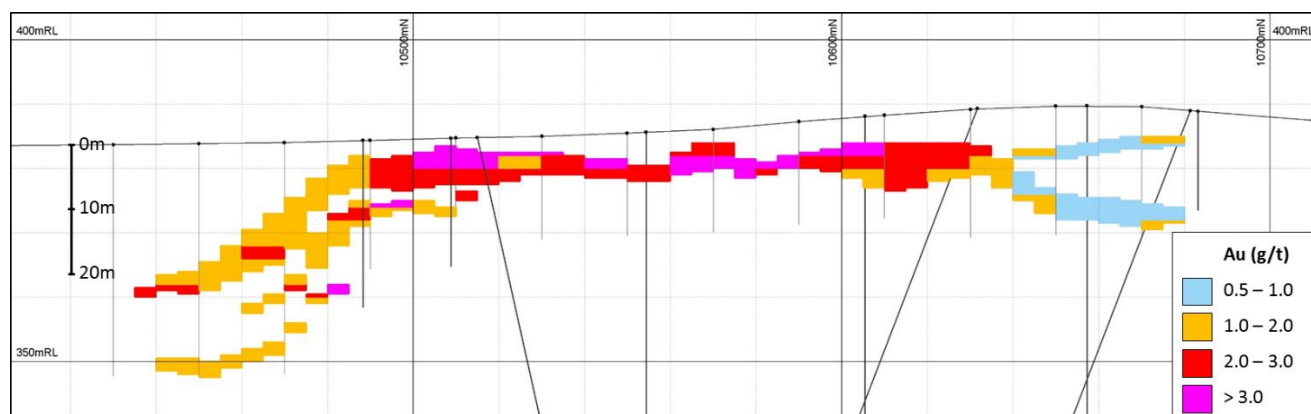

Figure 2: Long Section 10700mE - Red Dog Mineral Resource

The historical drillholes were composited to 1 metre downhole to eliminate any residuals. There was no requirement to composite the new drilling as all the samples were 1 m in length. Rotary air blast drill holes were removed prior to statistical and geostatistical analysis. Top cutting was required to reduce the influence of outlier values. Variograms were generated using the flagged and mineralised composites. Optiro carried out kriging neighbourhood analysis based upon the gold variograms to optimise the estimation parameters, and these parameters were used for ordinary kriging into the 10m x 10 m x 5 m parent cells, with sub-celling to fill the volume.

Three search passes, with increasing search distance and decreasing minimum sample numbers, were employed to inform the model. A nearest neighbour approach was used to fill blocks which did not fill in the first three passes. This situation equated to 1% for the mineralised blocks.

Density was assigned based on weathering. Matsa supplied 30 measurements which were taken from reverse circulation (RC) chips using a pycnometer on pulps. These measurements suggested a density of 2.7 g/m^3 for the fresh and transitional material and 2.4 g/m^3 for the oxide material.

The estimation was validated and then classified as Indicated and Inferred in accordance with the JORC Code (2012) reporting guidelines. The default classification for the mineralisation is an Inferred Mineral Resource. Indicated Mineral Resources have been defined by a contiguous zone where the nominal drillhole density is approximately 20 m by 20 m.

The Indicated and Inferred resource estimate has been reported at a range of cut-off grades in Table 2.

Material	Cut-off grade g/t	Tonnes t	Gold g/t	Gold ounces
Oxide	**0.5**	**4,680**	**1.1**	**160**
	1	1,890	1.5	90
	1.5	450	2.1	30
	2	120	2.5	10
	3	30	3.5	0
Transitional & Fresh	0	363,450	2.2	26,160
	0.5	**363,120**	**2.2**	**26,160**
	1	334,660	2.4	25,400
	1.5	267,060	2.6	22,660
	2	198,890	2.9	18,810
	2.5	143,540	3.2	14,810
	3	84,380	3.5	9,610
	3.5	32,300	4.1	4,250
	4	14,950	4.5	2,170
	4.5	5,470	5.1	900
	5	2,300	5.6	410
	5.5	910	6.1	180
	6	810	6.2	160
	6.5	70	6.6	10
All	0	368,130	2.2	26,320
	0.5	**367,800**	**2.2**	**26,320**
	1	336,560	2.4	25,490
	1.5	267,510	2.6	22,680
	2	199,010	2.9	18,820
	2.5	143,570	3.2	14,810
	3	84,400	3.5	9,620
	3.5	32,300	4.1	4,250
	4	14,950	4.5	2,170
	4.5	5,470	5.1	900
	5	2,300	5.6	410
	5.5	910	6.1	180
	6	810	6.2	160
	6.5	70	6.6	10

Table 2: Red Dog Global Mineral Resource tabulation by Au cut-off grade

Next Steps

In order to determine the economic potential of the Red Dog gold project, Matsa is conducting pit optimisations, metallurgical testing and mining studies. A Native Vegetation Clearing Application was completed and submitted to DMIRS late in 2017 in order to speed up potential mining timeframes.

Matsa considers the Red Dog project has the potential to be a near term mining opportunity with Matsa's Fortitude mine infrastructure only 25km to the east and the Red October camp and accommodation infrastructure only 20km to the north.
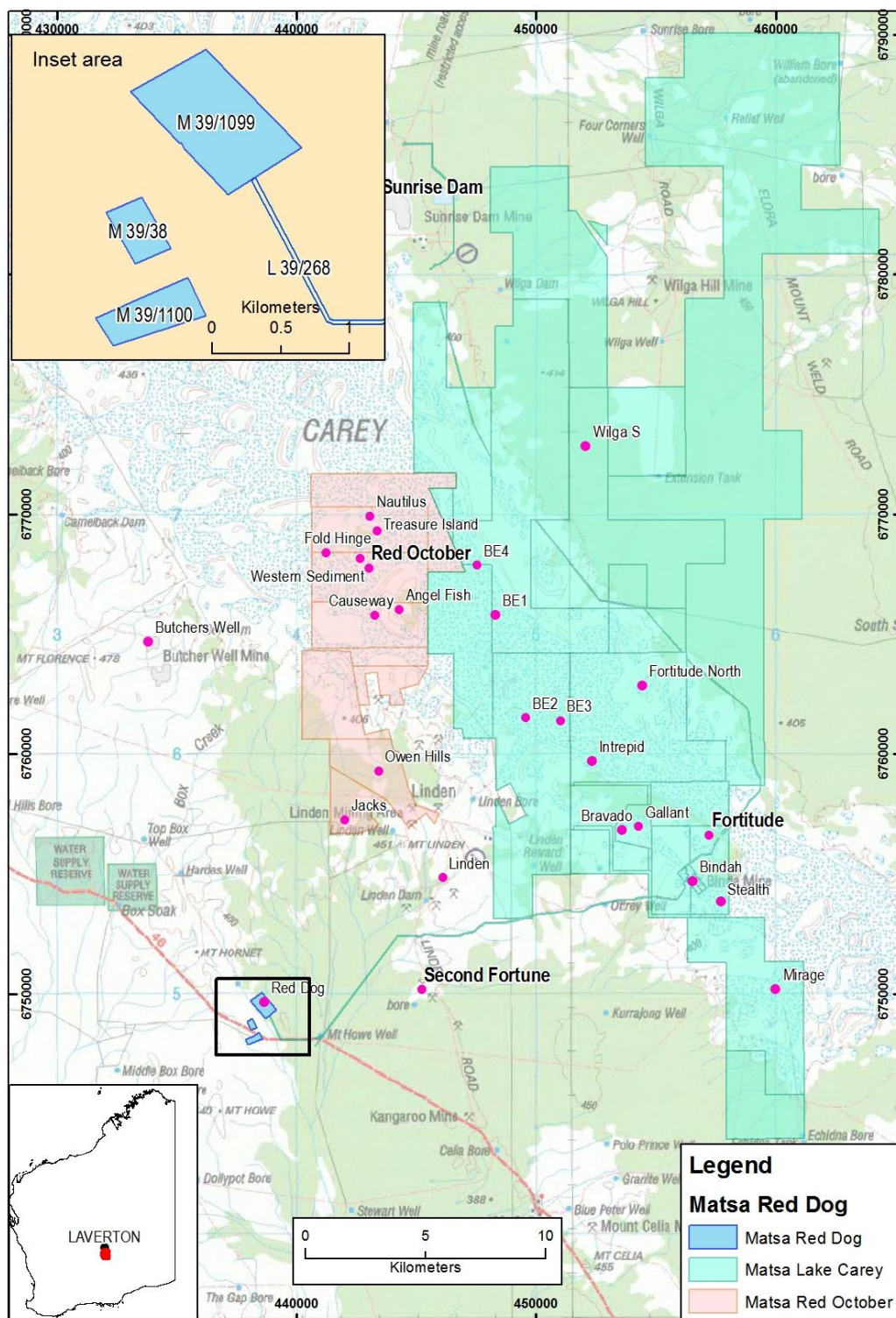

Figure 3: Red Dog Location plan

Matsa Resources Limited

For further information please contact:

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Competent Person

The information in this report that relates to Exploration results is based on information compiled by Mark Csar, who is a Fellow of the Australasian Institute of Mining and Metallurgy. Mark Csar is a full time employee of Matsa Resources Limited. Mark Csar has sufficient experience which is relevant to the style of mineralisation and the type of ore deposit under consideration and the activity which he is undertaking 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'. Mark Csar consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information contained in this ASX release relating to Mineral Resources has been compiled by Susan Havlin of Optiro Ltd. Susan Havlin is a Member of The Australasian Institute of Mining and Metallurgy and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which she is undertaking 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". Susan Havlin consents to the inclusion in the report of the matters based on her information in the form and context in which it appears.

Appendix 1 - Matsa Resources Limited – Red Dog Project

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

Criteria	JORC Code explanation	Commentary
Sampling techniques	• *Nature and quality of sampling (eg 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.* • *Measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* • *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 (eg '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 (eg submarine nodules) may warrant disclosure of detailed information.*	RC drilling using cyclone split on 1m intervals. Samples typically 2- 3 kg and pulverized to 50g charge for FA-AAS. Historical: RAB and RC drilling sampled with drill chips. RAB sampled with 2 to 5m composites with 1m splits in areas of elevated results. RC drilling sampled at 1m intervals. Samples were sub-split for assay by Aqua Regia or Fire assay.
Drilling techniques	• *Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg 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).*	RC drilling using face sampling bit. Historical: Details of pre 2015 (Billiton/Newmont/SOG) drilling by RAB, RC and Diamond methods unknown. Post 2015 RAB drilling carried out with small scale rig using 60mm drill bit Post 2015 RC drilling carried out by 5 inch face sampling bit with KDA 250 RC Rig.
Drill sample recovery	• *Method of recording and assessing core and chip sample recoveries and results assessed.*	Recoveries visually assessed for weight consistency. Historical: No records of recovery noted is records. Shallow drilling is expected to have high recovery based on nearby drilling experience.
	• *Measures taken to maximise sample recovery and ensure representative nature of the samples.*	Geologist on rig whilst drilling. On-rig assessments and remedy, if required, completed at rig. Historical: No record noted.

Criteria	JORC Code explanation	Commentary
	• *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.*	No relationship between recovery and grade noted in QA/QC review. Historical: Not determined
Logging	• *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.*	Chips have been logged for, but not limited to qualities including lithology, hardness, oxidation and weathering. This detail is considered appropriate for ongoing studies. Logging in generally qualitative in nature. Holes have been chip trayed for reference. All holes and intervals have been logged. Historical: A limited number of holes have qualitative geological logging. A selected number of samples have been petrographically described in detail.
Sub-sampling techniques and sample preparation	• *If core, whether cut or sawn and whether quarter, half or all core taken.* • *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.* • *Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples* • *Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling* • *Whether sample sizes are appropriate to the grain size of the material being sampled.*	RC chips sub-sampled using cone splitter and sampled dry. Splitter regularly checked for cleanliness and correct operation. Duplicates taken 1:20. QAQC samples taken at 1:20. Sample weights of ~3kg documented are considered adequate. All samples were dry. Historical: NQ Diamond holes are RC pre-collared in the area of interest (top 50m). Data on subsampling methodology of holes drilled prior to 2015 is absent. Some early historical drill programs report selective sampling, assumedly on visual veins. This may limit validity of some intersections. Since 2015, holes DDRC21 to 33 were spear sampled and DDRC34 to 57 were riffle split. Sample prep in Lab is standard for all assay procedures. Samples, where recorded, were sent to industry labs. Anomalous composites repeated with individual 1m splits. Unknown Sample weights of ~3kg documented are adequate for fine gold.
Quality of assay data and laboratory tests	• *The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.*	Samples were dispatched for gold determination by Fire Assay with AAS finish, which are industry standard processes. Standards/blanks used for QAQC at 1:20 sampling frequency. No significant bias noted. Historical: Assay accuracy determined by laboratory QACQ processes. Standards, blanks and duplicates are incorporated in the sample submissions to quantify any accuracy or precision issues. Historical: Samples were dispatched for low level gold determination by Fire Assay or Aqua Regia, which are industry standard processes. Assay accuracy determined by laboratory QACQ process.

Criteria	JORC Code explanation	Commentary
		Drilling QAQC not recorded. Lab reports show standard industry QA QC procedures in place.
	• *For geophysical tools, spectrometers, handheld XRF instruments, etc, the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.* • *Nature of quality control procedures adopted (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.*	
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.*	All results were checked by senior staff. Several holes were twinned adjacent to historical RC holes. Data logged electronically on site with automated validation procedures and data entry checks. Data transferred to company database on completion of program. No adjustments to assay data made. Historical: Composites validated by individual 1m splits. No twinned holes carried out. Historical data transferred from publically available reports. Post 2015 data available as hardcopy reports. No amendments to assay data have been made.
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.*	Holes marked out prior to drilling using decimetre accuracy DGPS (+/- 0.3m). Holes not surveyed post drilling. Historical hole collars surveyed using decimetre accuracy DGPS where collars reliably located. Red Dog is located in GDA94 UTM co-ordinate system Zone 51. A local 2 point grid transformation is used: Local MGA51 East Point 1 10539.3 438407.6 North Point 1 11020.5 6749871.0 East Point 2 11037.4 439039.9 North Point 2 10384.7 6749387.8 Topographic control via decimetre accuracy DGPS is considered suitable for level of control required.
Data spacing and distribution	• *Data spacing for reporting of Exploration Results.*	Data spacing over main mineralised area is 20m x 20m, surrounded by 40 m x 40m away from mineralised area. Some historical RC drill spacing has been brought down to 10m x 10m. Samples have been composited for reporting results as appropriate using 0.5g/t Au lower cut. RC sampling was carried on a 1m basis.

Criteria	JORC Code explanation	Commentary
	• *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.*	
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.*	RC Drilling was vertical and tests a relatively flat lying basalt/andesite unit. The minimum 1m sampling interval may have diluted parts of the mineralised unit to this minimum sampling width in parts and on edges of the unit. Historical drilling data was also to a minimum 1m sampling interval. No bias, apart from that mentioned herein is thought to have occurred due to orientation of drilling direction.
Sample security	• *The measures taken to ensure sample security.*	Samples transported to assay lab were collected from Fortitude site by laboratory staff. Samples numbered and recorded. Historical: Unknown-Post 2015 samples are either on site or relocated to another accessible area.
Audits or reviews	• *The results of any audits or reviews of sampling techniques and data.*	No audit carried out.

Section 2 Reporting of Exploration Results
(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 sites, wilderness or national park and environmental settings.* • *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.*	Tenements M39/38, M39/1009 and M39/1100 are live and held by M and R Hodges. The tenements are operated by Matsa Resources under an option to purchase agreement with the tenement holder. There are no known impediments to operating in the area.
Exploration done by other parties	• *Acknowledgment and appraisal of exploration by other parties.*	Previous explorers include CSR, Pennzoil-Vam JV, Shell Company Australia, Billiton Australia (1985 – 1990), Billiton-Newmont Australia JV (1990 – 1992), M Hodges – Welcome Stranger Mining (1993), M. Hodges (1994 – 1998), Goldfields Kalgoorlie (1999), Sons of Gwalia (2000 – 2003), Wilson (2004-2011) Saracen (2012- 2015), M. Hodges (2015 – 2017).
Geology	• *Deposit type, geological setting and style of mineralisation.*	The deposit type being sought at Red Dog are orogenic syntectonic gold mineralisation. Gold is interpreted to be associated with major NW striking shear zones and flat lying localised shearing and alteration.

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:*
	  ○ *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*
	  ○ *down hole length and interception depth*
	  ○ *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.*
		See Appendix 2 for listing of drill holes.

Data aggregation methods	• *In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg cutting of high grades) and cut-off grades are usually material and should be stated.* • *Where aggregate intercepts incorporate short lengths of high grade results and longer lengths of low grade results, the procedure used for such*	Intercepts are weight averaged with a lower cut of 0.5g/Au and no upper cut.

Criteria	JORC Code explanation	Commentary
	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.*	
Relationship between mineralisation widths and intercept lengths	• *These relationships are particularly important in the reporting of Exploration Results.* • *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 (eg 'down hole length, true width not known').*	All intercepts quoted relate to downhole depth. The mineralised unit is flat to gently dipping. Intercepts in are expressed in downhole metres.
Diagrams	• *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.*	Diagrams have been included in the text.
Balanced reporting	• *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.*	Refer Appendix 2.
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.*	Surface geology interpretation and geophysics exists over the area of interest.
Further work	• *The nature and scale of planned further work (eg tests for lateral extensions 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.*	Forward activities include resource estimation and potential for mining evaluation as well as further drilling.

Section 3 Estimation and Reporting of Mineral Resources

(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.*	Geological and sampling data was entered directly into a computer on site. Assay data was received from the laboratory in digital format and lookup tables were used to match sampling and assay data. Survey data was imported from DGPS csv output files. All geological, sampling and assay data was reviewed to ensure validity. Data audits were conducted using industry software. Audits included checks for missing or erroneous holes, samples, assay, hole depths, geological codes and survey data. Missing data (e.g. LNR samples) recorded and noted.
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 indicate why this is the case.*	Mr Mark Csar is the competent Person who has visited site on numerous occasions. No Optiro personnel have been to site. All aspects of drilling and sampling are considered by the Competent Persons to be of high industry standard.
Geological interpretation	• *Confidence in (or conversely, the uncertainty of) the geological interpretation of the mineral deposit.* • *Nature of the data used and of any assumptions made.* • *The effect, if any, of alternative interpretations on Mineral Resource estimation.* • *The use of geology in guiding and controlling Mineral Resource estimation.* • *The factors affecting continuity both of grade and geology.*	Drilling on a 20 m x 20 m pattern shows consistency of interpretation between sections. An alternate mineralisation interpretation is difficult to suggest. There are isolated high grade intercepts which likely reflect short length structural anomalism (faulting), but the influence of these appears to be less than drill spacing. Lithology (MB) is largely uniform through the area. Alteration is commonly associated with mineralisation and was used to confirm grade outlines. Grade shells were generated using a minimum 2m thickness and a 0.5 g/t gold cut-off. This grade represents an inflection in the cumulative population distribution and enabled the mineralisation to be captured in a coherent envelope, which agreed with the geological model. A lower grade inflection of 0.2 g/t gold is present but this is too low to define potential economic boundaries.
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.*	The Red Dog deposit extends approximately 240 m in a grid N-S direction and 200 m in an E-W direction. The mineralisation is flat lying and extends from just below surface to a depth of at least 30 m below the surface. Mineralisation is typically 3 -14 m thick.

Criteria	JORC Code explanation	Commentary
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.* • *The availability of check estimates, previous estimates and/or mine production records and whether the Mineral Resource estimate takes appropriate account of such data.* • *The assumptions made regarding recovery of by-products.* • *Estimation of deleterious elements or other non-grade variables of economic significance (eg sulphur for acid mine drainage characterisation).* • *In the case of block model interpolation, the block size in relation to the average sample spacing and the search employed.* • *Any assumptions behind modelling of selective mining units.* • *Any assumptions about correlation between variables.* • *Description of how the geological interpretation was used to control the resource estimates.* • *Discussion of basis for using or not using grade cutting or capping.* • *The process of validation, the checking process used, the comparison of model data to drill hole data, and use of reconciliation data if available.*	Estimation was completed in Datamine Studio RM using dynamic anisotropy on an Ordinary Kriged (OK) model to estimate the gold grade. Grades were estimated into parent blocks of 10 mE by 10 mN by 5 mRL. Sub-celling down to 5 mE by 5 mN by 1.25 mRL was employed for resolution of the mineralisation boundary. The mineralisation wireframe was used to code both the 1 m composites as well as the block model. Kriging neighbourhood analysis was performed to optimise the block size, sample numbers, and discretisation levels with the goal of minimising conditional bias in the gold grade estimates. A total of three search passes was used, with the first search pass set to the range of the variogram. A minimum of 8 and a maximum of 30 samples were used. The search stayed the same for the second pass but was increased by a factor of 2 for the third and final pass. The minimum number of samples was reduced to 6 for the second and third pass. A nearest neighbour approach was used to fill blocks which did not fill in the first three passes. This situation applied to 1% of the mineralised blocks. No deleterious elements have been identified. No selective mining units have been assumed. Top-cuts were applied to reduce the variability of the data and to remove the outliers. The estimated block model grades were visually validated against the input drillhole data and comparisons were carried out against the drillhole data and by northing, easting and elevation slices. Global comparison between the input data and the block grades for each variable is considered acceptable (±10%). This is a maiden Mineral Resource so no comparison was carried out.
Moisture	• *Whether the tonnages are estimated on a dry basis or with natural moisture, and the method of determination of the moisture content.*	Tonnages were estimated on a dry in situ basis. No moisture values were reviewed.
Cut-off parameters	• *The basis of the adopted cut-off grade(s) or quality parameters applied.*	The Mineral Resource has been reported at a 0.5 g/t gold cut-off and has been based on assumptions about economic cut-off grades for open pit mining from current mining operations in the region. The resource estimate has not been constrained by a pit shell.
Mining factors or assumptions	• *Assumptions made regarding possible mining methods, minimum mining dimensions and internal (or, if applicable, external) mining dilution. It is always necessary as part of the process of determining reasonable*	It has been assumed that the deposit could potentially be mined using open pit methods.

Criteria	JORC Code explanation	Commentary
	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.	No assumptions have been made to date regarding minimum mining widths or dilution.
Metallurgical factors or assumptions	• *The basis for assumptions or predictions 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.*	No assumptions have been made regarding metallurgy. Mining of this style of gold deposit is common in the area. The metallurgy, processing and waste management of these deposits is typically simple and well-understood. Results of preliminary historical metallurgical test work conducted by Hodges in 2016 suggests ~90% recovery. This figure is expected to improve with further targeted testwork.
Environmental 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.*	No assumptions regarding possible waste and process residue disposal options have been made. It is assumed that such disposal will not present a significant hurdle to exploitation of the deposit and that any disposal and potential environmental impacts would be correctly managed as required under the regulatory permitting conditions.

Appendix 2: Matsa Resources Limited – Red Dog Project

Drill hole collar information and intervals > 0.5g/t Au (summary)

Hole_ID	East Local	North Local	RL	m Depth	Dip	Azimuth	M From	M To	M Thick	Au_ppm
17RDRC001	10580	10750	386	20	-90					
17RDRC002	10620	10750	386	20	-90					
17RDRC003	10660	10750	386	20	-90					
17RDRC004	10580	10710	386	20	-90					
17RDRC005	10620	10710	386	20	-90					
17RDRC006	10660	10710	387	20	-90					
17RDRC007	10700	10710	387	20	-90		16	17	1	0.66
17RDRC008	10740	10710	387	20	-90					
17RDRC009	10580	10670	386	20	-90					
17RDRC010	10620	10670	387	20	-90					
17RDRC011	10660	10670	388	20	-90		13	14	1	0.87
17RDRC012	10700	10670	390	20	-90		5	6	1	1.76
17RDRC013	10740	10670	388	20	-90		16	18	2	2.76
17RDRC014	10620	10650	387	20	-90		19	20	1	0.9
17RDRC015	10660	10650	389	20	-90		8	15	7	1.69
17RDRC016	10680	10650	389	20	-90		12	14	2	1.09
17RDRC017	10700	10650	390	20	-90		7	8	1	1.01
17RDRC018	10720	10650	390	16	-90		3	4	1	0.76
17RDRC019	10740	10650	389	16	-90					
17RDRC020	10620	10630	387	20	-90					
17RDRC021	10640	10630	388	20	-90		15	17	2	1.87
17RDRC022	10660	10630	389	20	-90		15	16	1	1.23
17RDRC023	10680	10630	389	20	-90		8	12	4	2.32
17RDRC024	10700	10630	389	20	-90		5	10	5	1.27
17RDRC025	10720	10630	389	16	-90		6	12	6	2.01
17RDRC026	10740	10630	388	16	-90		12	14	2	3.33
17RDRC027	10800	10630	386	20	-90					
17RDRC028	10620	10610	387	20	-90					
17RDRC029	10640	10610	387	20	-90		13	19	6	4.57
17RDRC030	10660	10610	388	20	-90		13	16	3	1.44
17RDRC031	10680	10610	388	16	-90		7	12	5	3.15
17RDRC032	10700	10610	388	16	-90		4	12	8	3.11
17RDRC033	10720	10610	388	16	-90		4	7	3	3.93
17RDRC034	10740	10610	388	16	-90		6	11	5	3.34
17RDRC035	10620	10590	386	16	-90		12	14	2	3.72
17RDRC036	10640	10590	387	16	-90		11	16	5	3.14
17RDRC037	10660	10590	387	16	-90		12	14	2	1.94
17RDRC038	10680	10590	388	16	-90		8	10	2	5.33
17RDRC039	10700	10590	387	16	-90		5	6	1	5.47
17RDRC040	10720	10590	387	16	-90		4	6	2	1.79
17RDRC041	10740	10590	386	16	-90		6	7	1	2.41

17RDRC042	10760	10590	386	16	-90		10	12	2	2.83
17RDRC043	10800	10590	385	20	-90		17	20	3	1.21
17RDRC044	10620	10570	386	16	-90		10	12	2	2.98
17RDRC045	10640	10570	386	16	-90		11	16	5	3.79
17RDRC046	10660	10570	386	16	-90		9	13	4	3.68
17RDRC047	10680	10570	386	16	-90		5	10	5	1.53
17RDRC048	10700	10570	386	16	-90		3	6	3	5.43
17RDRC049	10720	10570	386	16	-90		3	6	3	3.45
17RDRC050	10740	10570	385	16	-90		7	9	2	2.5
17RDRC051	10760	10570	385	16	-90		11	14	3	1.32
17RDRC052	10580	10550	385	20	-90					
17RDRC053	10620	10550	386	16	-90		5	6	1	1.4
17RDRC054	10640	10550	386	16	-90		13	15	2	1.63
17RDRC055	10660	10550	386	16	-90		9	11	2	3.48
17RDRC056	10680	10550	386	16	-90		7	8	1	5.11
17RDRC057	10700	10550	385	16	-90		4	7	3	2.22
17RDRC058	10720	10550	385	16	-90		6	8	2	4.26
17RDRC059	10740	10550	385	16	-90		8	12	4	1.11
17RDRC060	10760	10550	385	16	-90		14	15	1	2.76
17RDRC061	10800	10550	385	20	-90		17	18	1	0.78
17RDRC062	10620	10530	386	20	-90		12	13	1	0.75
17RDRC063	10640	10530	386	20	-90		6	9	3	2.72
17RDRC064	10660	10530	385	20	-90		6	11	5	2.9
17RDRC065	10680	10530	385	16	-90		7	9	2	2.75
17RDRC066	10700	10530	385	16	-90		2	6	4	3.11
17RDRC067	10720	10530	385	16	-90		4	6	2	5.84
17RDRC068	10740	10530	385	20	-90		10	12	2	3.75
17RDRC069	10760	10530	385	20	-90		14	19	5	2.3
17RDRC070	10580	10510	384	20	-90		3	4	1	0.74
17RDRC071	10620	10510	385	20	-90		10	11	1	0.6
17RDRC072	10640	10510	385	20	-90		11	19	8	2.56
17RDRC073	10660	10510	385	20	-90		5	16	11	2.87
17RDRC074	10680	10510	385	20	-90		15	16	1	0.94
17RDRC075	10700	10510	385	12	-90		2	5	3	0.92
17RDRC076	10720	10510	385	12	-90		4	5	1	1.44
17RDRC077	10740	10510	385	12	-90		6	12	6	155.11
17RDRC078	10760	10510	384	12	-90					
17RDRC079	10800	10510	385	20	-90					
17RDRC080	10640	10490	384	20	-90		0	2	2	1.21
17RDRC081	10660	10490	384	20	-90		8	18	10	2.56
17RDRC082	10680	10490	384	20	-90		2	16	14	2.3
17RDRC083	10700	10490	384	20	-90		6	12	6	1.76
17RDRC084	10720	10490	384	12	-90		4	8	4	1.29
17RDRC085	10740	10490	384	12	-90		11	12	1	0.6
17RDRC086	10760	10490	384	15	-90		12	15	3	1.54
17RDRC087	10640	10470	384	36	-90		23	30	7	3.3

17RDRC088	10660	10470	384	36	-90		3	4	1	0.51
17RDRC089	10680	10470	384	36	-90		13	23	10	1.25
17RDRC090	10700	10470	384	36	-90		10	19	9	0.98
17RDRC091	10720	10470	384	36	-90		8	13	5	2.69
17RDRC092	10740	10470	384	36	-90		15	17	2	3.43
17RDRC093	10760	10470	384	36	-90		19	21	2	0.72
17RDRC094	10640	10450	384	36	-90		33	34	1	3.1
17RDRC095	10660	10450	384	36	-90		22	24	2	4.48
17RDRC096	10680	10450	384	36	-90		25	27	2	1.96
17RDRC097	10700	10450	384	36	-90		20	24	4	2.35
17RDRC098	10720	10450	384	36	-90		4	6	2	0.77
17RDRC099	10740	10450	384	36	-90		14	23	9	0.87
17RDRC100	10660	10430	384	36	-90		30	32	2	1.75
17RDRC101	10700	10430	384	36	-90					
17RDRC102	10740	10430	384	36	-90		22	23	1	1.22
17RDRC103	10720	10331	383	60	-90		28	29	1	2.46
DDD001	10700	10515	385	200.5	-71.5	0	2	8	6	1.68
DDRC001	10696	10681	389	124	-60	180	9	10	1	0.54
DDRC004	10697	10632	389	100	-60	180	7	11	4	1.78
DDRC007	10696	10683	389	100	-60	90	17	18	1	0.55
DDRC008	10645	10684	387	100	-60	90	17	18	1	1.17
DDRC011	10697	10657	390	110	-90		7	8	1	2.13
DDRC012	10698	10606	388	120	-90		4	8	4	2.82
DDRC013	10647	10631	388	120	-90		13	16	3	0.72
DDRC015	10750	10631	388	100	-90		30	31	1	0.69
DDRC016	10699	10554	386	77	-90		6	8	2	1.56
DDRC21	10732	10489	384	24	-90		8	9	1	0.85
DDRC22	10721	10488	384	26	-90		4	6	2	15.78
DDRC23	10711	10488	384	26	-90		7	8	1	1.83
DDRC24	10701	10488	384	26	-90		2	3	1	1.17
DDRC25	10691	10489	385	26	-90		2	17	15	2.25
DDRC26	10691	10500	385	17	-90		2	12	10	1.36
DDRC27	10691	10509	385	17	-90		1	5	4	2.07
DDRC28	10701	10509	385	20	-90		1	7	6	0.99
DDRC29	10711	10509	385	14	-90		2	6	4	21.61
DDRC30	10730	10508	385	17	-90		6	7	1	1.09
DDRC31	10731	10498	384	14	-90		7	8	1	1.02
DDRC32	10730	10518	385	14	-90		3	8	5	13.73
DDRC33	10740	10527	385	18	-90		10	13	3	1.75
RDRC35	10692	10479	384	34	-90		4	20	16	1.41
RDRC36	10681	10481	384	37	-90		9	24	15	1.71
RDRC37	10681	10489	384	31	-90		4	5	1	0.81
RDRC38	10680	10498	385	20	-90		3	16	13	2.36
RDRC39	10680	10508	385	18	-90		11	12	1	1.56
RDRC40	10680	10519	385	16	-90		4	6	2	2.21
RDRC41	10679	10529	385	16	-90		6	10	4	2.67

RDRC42	10680	10539	386	16	-90		7	9	2	1.51
RDRC43	10679	10550	386	16	-90		7	9	2	2.12
RDRC44	10679	10559	386	16	-90		8	10	2	5.53
RDRC45	10678	10570	386	16	-90		4	5	1	0.99
RDRC46	10678	10580	387	16	-90		8	12	4	2.95
RDRC47	10676	10589	387	16	-90		9	12	3	2.44
RDRC48	10687	10589	388	13	-90		7	9	2	3.06
RDRC49	10688	10579	387	13	-90		8	9	1	6.97
RDRC50	10689	10569	386	13	-90		7	9	2	9.35
RDRC51	10689	10558	386	13	-90		7	9	2	3.94
RDRC52	10690	10549	386	13	-90		7	8	1	3.77
RDRC53	10690	10539	386	13	-90		7	9	2	4.17
RDRC54	10690	10529	385	13	-90		0	1	1	0.62
RDRC55	10691	10519	385	13	-90		3	8	5	1.79
RDRC56	10733	10517	385	13	-60	270				
RDRC57	10728	10520	385	13	-60	90	7	8	1	1.77
SDDRC17	10724	10611	388	114	-60	270	6	8	2	2.82
SDDRC19	10723	10569	386	124	-60	270	6	8	2	3.55
WSDDRC19	10682	10479	384	22	-60	270	16	20	4	4.7
WSDDRC20	10681	10428	383	32	-60	270				

Where a hole has more than one intercept, only the upper intercept is reported. Historical holes were used only if the collar could be reliably identified and collar co-ordinates recorded. All holes are RC drilled. Diamond Hole DDD001 is RC drilled for the upper 50m.