



# Otago South Gold Project Update

ASX Release | 31 July 2017

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New Age Exploration Limited (“NAE” or “the Company”) provides the following update on its Exploration Program on the Otago South Gold Project in New Zealand.

## **Soil Sampling Program**

The following additional soil and rock chip sampling has now been completed on the Mahinerangi and Teviot Permits in Otago:

- 2 new lines over historic gold workings on the Mahinerangi Permit using a man-portable drill with depths up to 6 meters, successfully penetrating thick loess cover in the majority of cases (15 of the 21 man-portable drill holes penetrated loess with the remainder still in loess at 6m depth).
- A number of new lines in the southern part of the Teviot permit where additional conductivity feature targets were identified.

A total of 73 soil sampling lines with 877 soil samples have now been collected and analyzed using a portable XRF instrument. The results of the soil sampling completed are shown in Appendix 1 (Mahinerangi Permit) and Appendix 2 (Teviot Permit). 246 rock chip samples were also collected and analyzed. The 6 soil lines planned in the northern part of the Teviot permit were not able to be completed as track conditions were too difficult to access this area.

The soil and rock chip results are inconclusive in that they have not identified any significant anomalous levels of arsenic (a pathfinder mineral for gold) for follow up exploration.

The pXRF results show that soil sampling the most prominent conductivity highs from the airborne survey flown by Glass Earth NZ Ltd in 2007, within the Lower Greenschist Facies schist, has not been an effective exploration targeting method to date.

The rock chip sample on line 27 on the Teviot Permit with a 193ppm Arsenic result was followed up and it was not possible to reproduce the result from other nearby rock chip or soil samples. The anomalous arsenic result was taken from a quartz-rich schist with a chert protolith and these rocks generally have higher than background arsenic concentrations relative to other local schist types.

## **Geological Mapping**

Further geological mapping has been undertaken by Dr MacKenzie on both permits. The mapping undertaken to date has better resolved the regional structure of the metamorphic basement rocks but has not identified any significant shear zones that have the potential to host gold mineralisation.

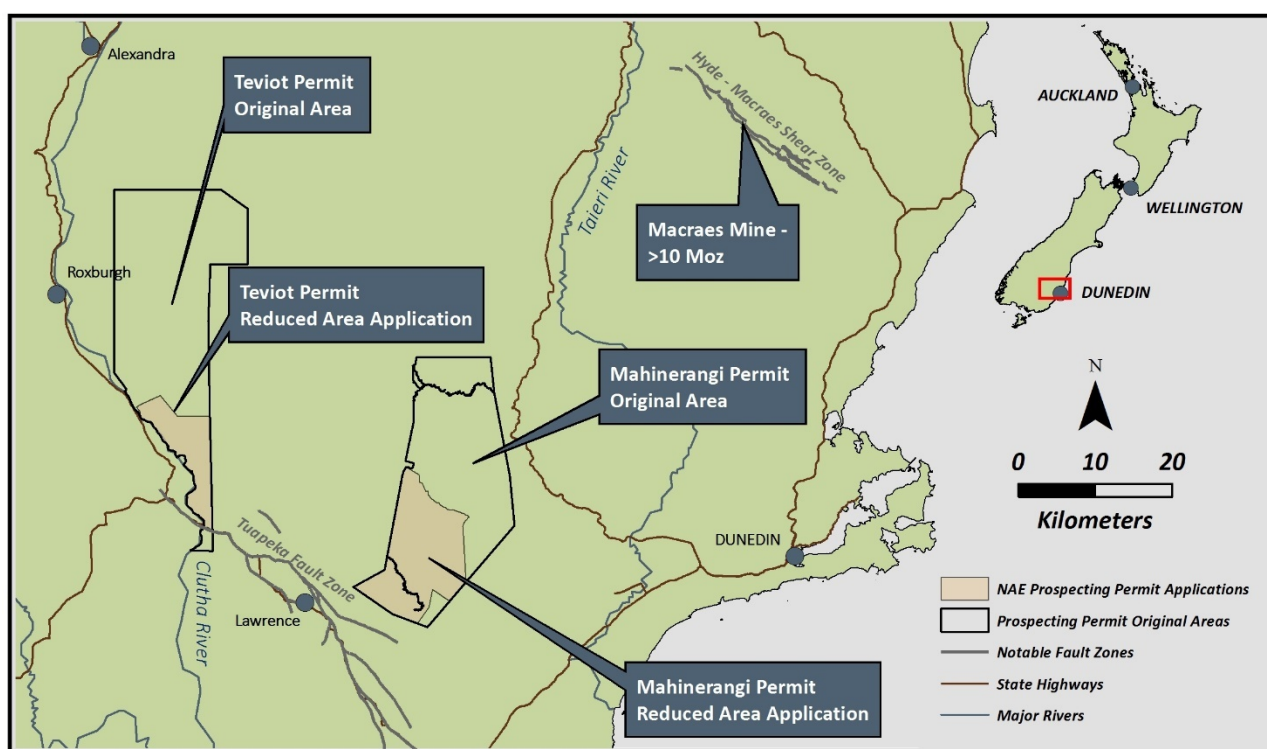
Mapping and petrographic study of the gold-bearing quartz veins in the historic gold workings around Lake Mahinerangi has shown that these appear to be relatively late stage, post-metamorphic, brittle features that are hosted in well defined, high angle, extensional faults. To date there is no evidence of any late metamorphic ductile shearing that would be indicative of any shear zone gold targets.

### Partial Relinquishment of Prospecting Permits

Due to the results to date and the increased annual permit fees, on 27 July 2017 NAE lodged an application to NZP&M for partial relinquishment of its Prospecting Permit areas as follows;

- Mahinerangi Permit reduced from 418 km<sup>2</sup> to 154 km<sup>2</sup>
- Teviot Permit reduced from 458 km<sup>2</sup> to 66 km<sup>2</sup>

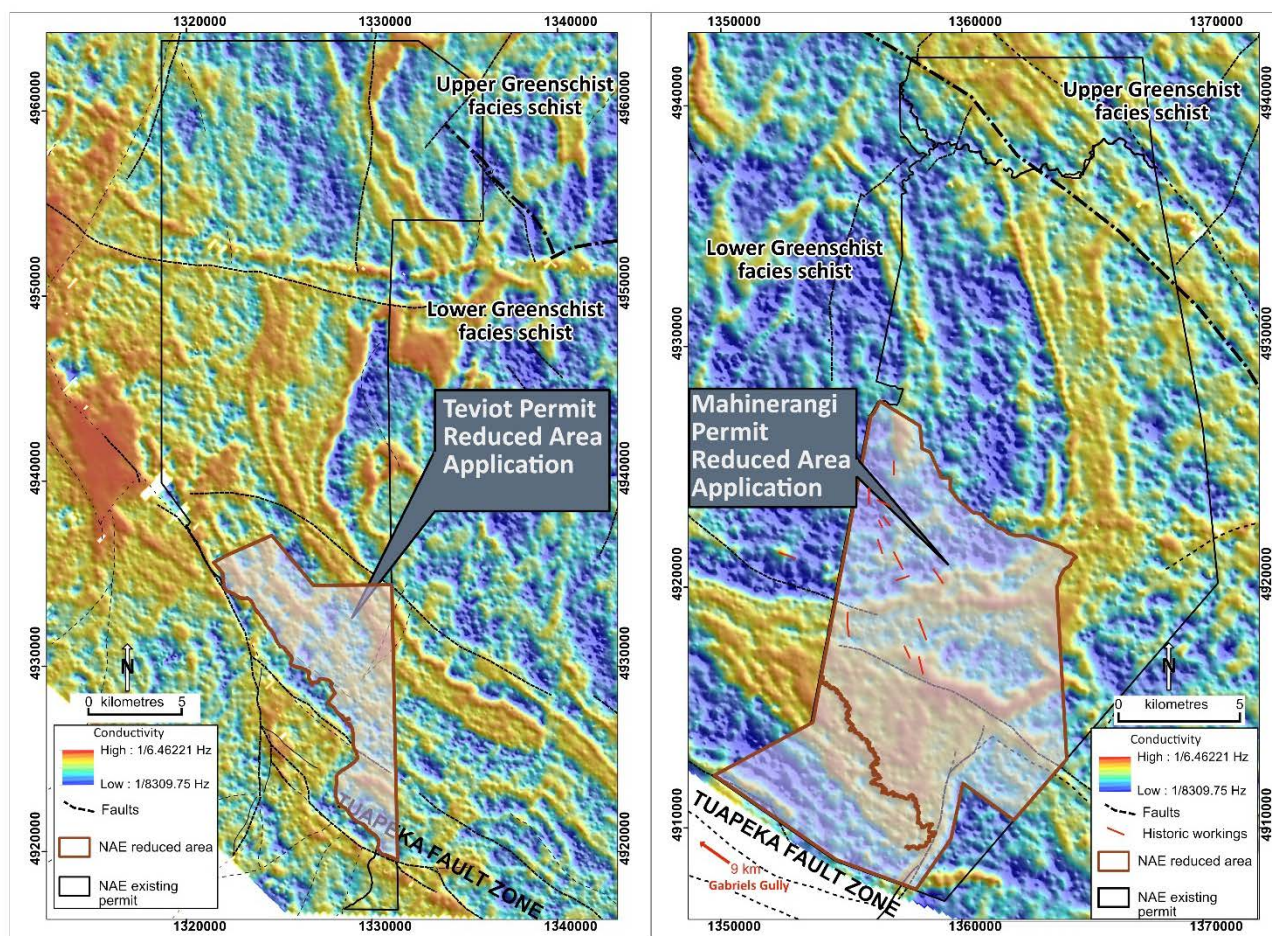
The 27 July 2017 application retains 25% of the total area of both permits and relinquishes 75% of the total area of both permits. The partial relinquishment application is expected to be accepted by NZP&M in the coming weeks and is expected to reduce the annual permit holding costs from NZ\$51,000 p.a to approx. NZ\$13,000 p.a.



NAE Prospecting Permit Partial Relinquishment Application 27 July 2017

The southern areas retained in both permits contain the most promising ground as;

- The historic workings associated with gold-bearing quartz veins are all located in the southern areas retained.
- The retained areas are the most proximal to known local alluvial gold deposits, such as Gabriels Gully (>0.5Moz Au).
- The retained permits cover the most complex zone of intersecting and converging conductivity lineaments that are oriented NW parallel to significant regional-scale faults and boundary features in the basement rocks (like the Tuapeka Fault zone and textural zone boundaries to the north and south, respectively). Furthermore, using our analogy with the Hyde Macraes Shear Zone, these NW-trending lineaments define the most favorable structural trend and orientation for potential shear zone hosted gold deposits.



NAE Prospecting Permit Retained Areas over Most Promising Ground with Old Workings and Favorable Conductivity Feature NW Orientation

## Budget

To date a total of approximately NZ\$112,000 has been spent on the Otago South Gold Project, inclusive of NZ\$26,000 in permit fee increases charged by the NZ Government in January. Expenditure on the project is under the budget of NZ\$150,000 set for the Initial Exploration Program.

## Next Steps

NAE is currently working with Dr MacKenzie and its technical consultants CRL Energy to determine the exploration strategy and work plan that may be most effective to further explore the retained areas. Future work will concentrate on further defining the nature of the schist basement rocks in the area of the southern conductivity lineaments and testing whether their spatial association with historical gold and arsenic bearing veins in this area is related to any pre-existing metamorphic fabric and/or potential ductile shearing of the basement rocks. Further field work will not be undertaken until Q4 at the earliest (after the winter season) and will be contained within a small budget.

**NAE Managing Director, Gary Fietz, commented:** “We have made a decision to reduce our Otago South Permit areas down to 25% of the previous areas due to lack of any conclusive results to date. The southern areas which we consider as the most prospective for shear hosted gold have been retained covering an area of 220 km<sup>2</sup> and we are working on a small follow up program later in the year over these areas.”



# COMPETENT PERSON'S STATEMENT

The information in this report that relates to Exploration Results is based on information compiled and reviewed by Dr Doug MacKenzie, who is a Senior Research Fellow at the University of Otago, Geology Department and is a Member and Chartered Professional Geologist of the Australasian Institute of Mining and Metallurgy. Dr MacKenzie has over 20 years research experience in the Otago Schist and related rocks with emphasis on relationships between structure, metamorphism and gold mineralization. Dr MacKenzie has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Dr MacKenzie consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

# FORWARD LOOKING STATEMENTS

This report contains "forward-looking information" that is based on the Company's expectations, estimates and forecasts as of the date on which the statements were made. This forward-looking information includes, among other things, statements with respect to the Company's business strategy, plans, objectives, performance, outlook, growth, cash flow, earnings per share and shareholder value, projections, targets and expectations, mineral reserves and resources, results of exploration and related expenses, property acquisitions, mine development, mine operations, drilling activity, sampling and other data, grade and recovery levels, future production, capital costs, expenditures for environmental matters, life of mine, completion dates, commodity prices and demand, and currency exchange rates. Generally, this forward-looking information can be identified by the use of forward-looking terminology such as "outlook", "anticipate", "project", "target", "likely", "believe", "estimate", "expect", "intend", "may", "would", "could", "should", "scheduled", "will", "plan", "forecast" and similar expressions. The forward looking information is not factual but rather represents only expectations, estimates and/or forecasts about the future and therefore need to be read bearing in mind the risks and uncertainties concerning future events generally.

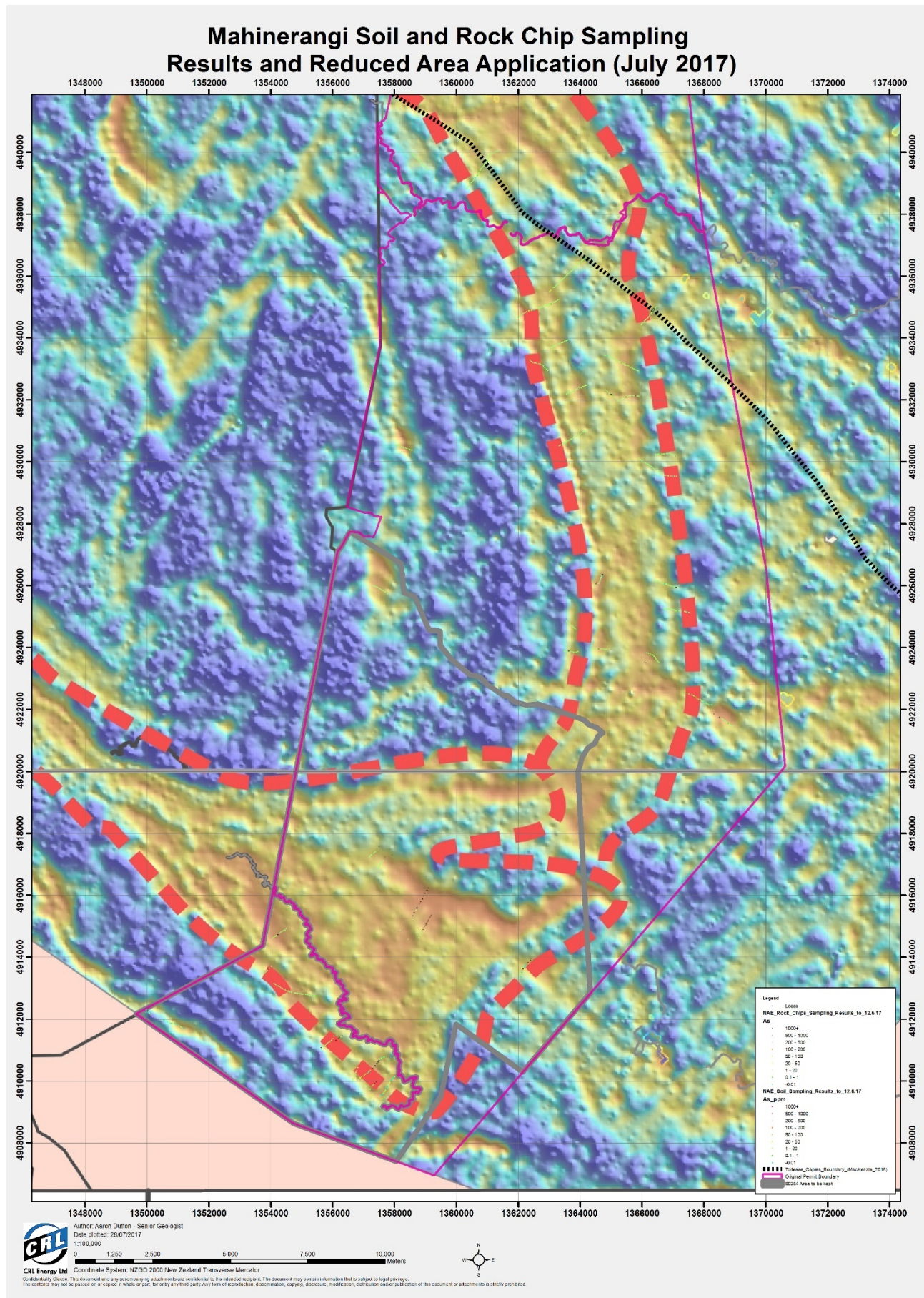


New Age Exploration Limited

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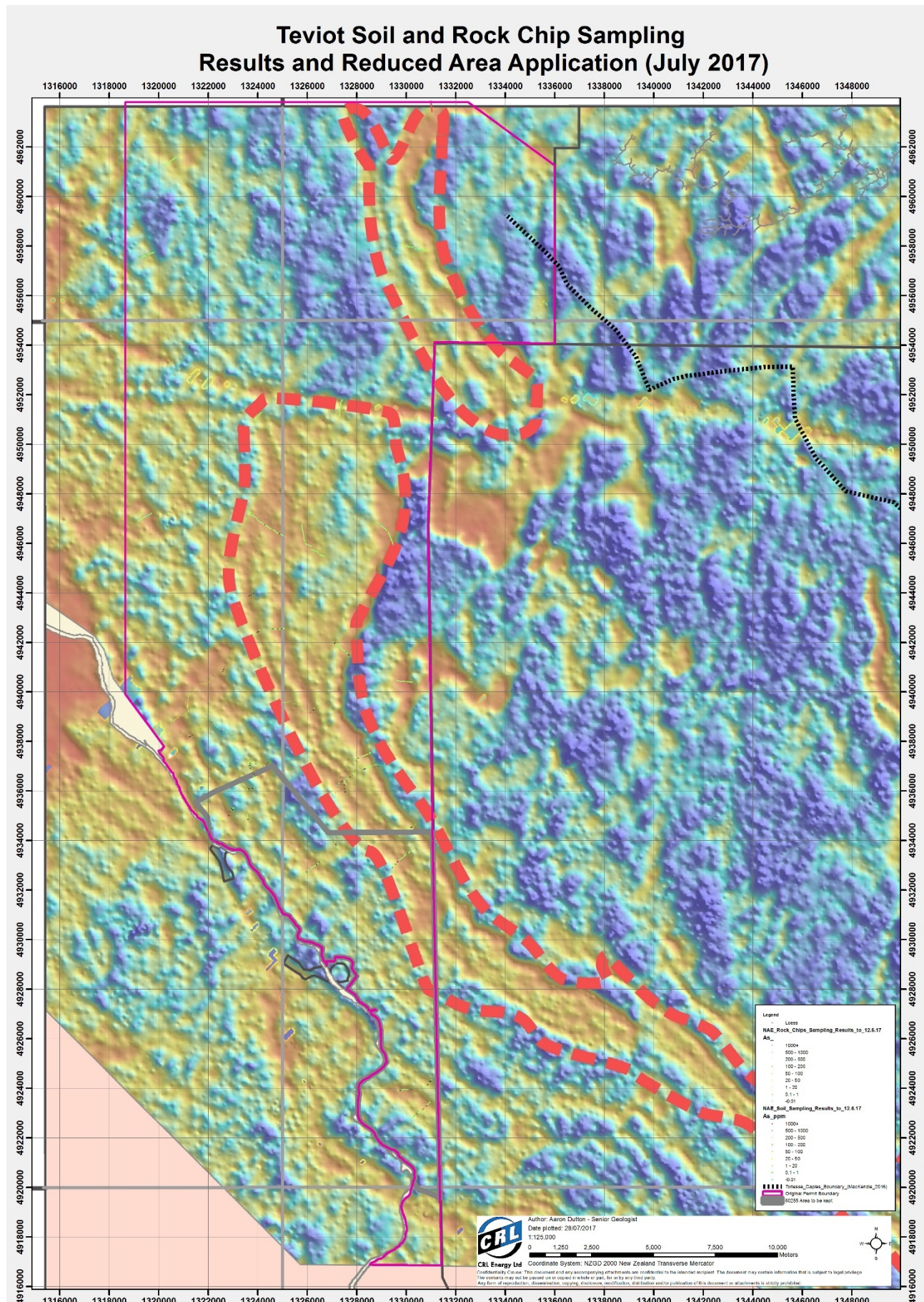
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# APPENDIX 1





## APPENDIX 2



# JORC CODE, 2012 EDITION- TABLE 1

## Section 1: Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
<i>Sampling techniques</i>	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></li> <li><i>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.</i></li> </ul>	<p>Airborne Resistivity Survey - The east Otago region was covered by a helicopter-borne airborne geophysical survey that was flown by Fugro Airborne Surveys Ltd for Glass Earth NZ Ltd in 2007. The survey used Fugro's proprietary RESOLVE™ electromagnetic (EM) system combined with a magnetic gradiometer to target the top 100 metres of the earth's crust. Five different electromagnetic (EM) signals at frequencies of 400, 1800, 8200, 40K and 140K Hz were recorded to measure apparent resistivity of the underlying rocks. Flight lines were flown northeast-southwest and spaced 300 m apart with northwest-southeast tie lines flown every 3 km. The helicopter flew at a height of approximately 60 m and the sensor that was towed underneath maintained an average above-ground height of 30 m ± 10 m. Conductivity images used and interpreted in this study were derived from the gridded data lodged with and available from New Zealand Petroleum and Minerals (NZP&amp;M) as Fugro; 2007; Airborne Geophysical Data; Unpublished Mineral Report MR4327.</p> <p>Soil Sampling – A total of 877 soil samples were collected in 2017 and analyzed using a portable XRF instrument. A further 138 sampling points were unable to penetrate overlying Loess windblown cover and were therefore not used. Soil samples were taken using a hand held auger which could penetrate up to 2 metres depth. Selected priority lines were then re-sampled with a man-portable drill capable which achieved depths of up to 6 meters, successfully penetrating loess cover. Where bedrock was shallow, soil samples were retrieved using trenching shovel and hand trowel to avoid auger refusal. Samples were bagged in zip lock, clear ~50 micron thick polyethylene bags No samples were composited.</p> <p>Rock Chip Sampling – A total of 246 rock chip samples were collected in 2017 and analyzed using a portable XRF instrument. Samples were taken using rock hammer or trenching shovel. No samples were composited.</p>
<i>Drilling techniques</i>	<ul style="list-style-type: none"> <li><i>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.).</i></li> </ul>	Not Applicable
<i>Drill sample recovery</i>	<ul style="list-style-type: none"> <li><i>Method of recording and assessing core and chip sample recoveries and results assessed.</i></li> <li><i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i></li> </ul>	Not Applicable



Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>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.</li> </ul>	
<b>Logging</b>	<ul style="list-style-type: none"> <li>Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	Not Applicable
<b>Sub-sampling techniques and sample preparation</b>	<ul style="list-style-type: none"> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>Measures taken to ensure that the sampling is representative of the in situ material collected, including for instance results for field duplicate/second-half sampling.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<p>Soil samples were approximately 150-400g. Samples were hand screened to remove any contaminant organic matter (e.g. roots). Samples were bagged in zip lock, clear ~50 micron thick polyethylene bags and whole samples analysed in the bags at field (in situ) moisture. In general the in-situ moisture content of the samples was very low due to hot, dry summer weather conditions (i.e. samples were dry to touch).</p> <p>In addition to pXRF analyses on whole samples at in-situ moisture in the field a small selection of samples underwent size fraction splitting using Laboratory Test Sieves from Endecotts Ltd compliant with British Standard BS410. Screen sizes were 4mm and 2mm. The &gt;4mm, 2-4mm, and &lt;2mm fraction underwent repeat pXRF analyses.</p> <p>The nature and quality of the sample preparation technique is considered appropriate. The sample sizes are considered appropriate to the grain size of the material.</p>
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>For geophysical tools, spectrometers, handheld XRF instruments, etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.</li> <li>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.</li> </ul>	<p>Soil and Rock Chip Sampling – All Soil and Rock Chip Samples were analyzed by a Innov-X A 3500 portable XRF instrument supplied by CRL Energy Ltd with reading times of 30 seconds per sample using Soil Analysis Mode. The excitation source for this analyser is a 10–40 keV, 5–50 µA, W anode X-ray tube and the detector is a thermo-electrically cooled Si PIN diode with a resolution of &lt;280 eV. Portable XRF analysis was carried out for the following suite of metals for all samples; As, Cr, Cu, Ag, Cd, Co, Fe, Hg, Mn, Mo, Ni, Pb, Rb, Sb, Se, Sn, Sr, Ti, Ba, Bi, U, V, W, Zn, Zr, Th. The average As +/- was 4ppm with a max +/- of 14ppm and a min +/- of 3ppm for the Innov-X A3500.</p> <p>The Innov-X A3500 portable XRF instrumented was calibrated daily using Alloy Certified Reference Materials produced by Analytical Reference Materials International (ARMI), and the calibration verified using Soil Certified Reference Materials produced by National Institute of Standards and Technology (NIST).</p> <p>Twenty four duplicate analyses were done randomly using the Innov-X A 3500 portable XRF in the field.</p> <p>Duplicate sample analysis of ~20 samples with the</p>



Criteria	JORC Code explanation	Commentary
		<p>highest As levels were undertaken for check analysis using Otago University's Innov-X XPD 4000 portable XRF instrument. This unit was also calibrated using Alloy Certified Reference Materials produced by Analytical Reference Materials International (ARMI), and the calibration verified using Soil Certified Reference Materials produced by National Institute of Standards and Technology (NIST).</p> <p>The excitation source for this analyser is a 10–40 keV, 5–50 µA, W anode X-ray tube and the detector is a thermo-electrically cooled Si PIN diode with a resolution of &lt;280 eV. Reading times were 30 seconds.</p> <p>Results from the Otago University pXRF were cross referenced against the original analyses results from the CRL Energy Ltd pXRF. The average variability of As results between instruments for soil samples was 5ppm with a maximum variability of 11ppm and a minimum variability of 1ppm. There were 4 soil samples where As was not detected by the Otago University pXRF but was detected by the CRL Energy instrument. In these cases the precision of the Otago University pXRF was on the same order of magnitude as the As result from the CRL Energy Ltd pXRF and all were less than 20ppm. In general the rock chip samples produced a larger variability. This is probably due to lower homogeneity of un-milled rock chip samples.</p>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li>• The verification of significant intersections by either independent or alternative company personnel.</li> <li>• The use of twinned holes.</li> <li>• Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>• Discuss any adjustment to assay data.</li> </ul>	<p>pXRF results and relative GPS location points were downloaded onto a field laptop daily and cross referenced with written notes. During download the GPS locations were plotted for a qualitative check against georeferenced aerial photos raster files. The results and the corresponding location points were compiled into a single Excel spreadsheet.. Precision for each element is recorded by the PXRF instrument and was uploaded into the results table.</p>
<b>Location of data points</b>	<ul style="list-style-type: none"> <li>• Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.</li> <li>• Specification of the grid system used.</li> <li>• Quality and adequacy of topographic control.</li> </ul>	<p>All data has been compiled on map grid system NZGD 2000 - New Zealand Transverse Mercator.</p> <p>Airborne Resistivity Survey - Locations have been obtained from the 2007 aeromagnetic survey flown by Fugro Airborne Surveys Pty Ltd. in Fugro; 2007; Airborne Geophysical Data; Unpublished Mineral Report MR4327.</p> <p>Soil and Rock Chip Sampling – Locations of all soil and rock chip sampling were recorded using a handheld Garmin e10 GPS using the New Zealand Transverse Mercator projection based on the New Zealand Geodetic Datum 2000. In general these points have an accuracy of +/-5m. Locations from this GPS were qualitatively cross-referenced in the field with GPS locations as located by a ASUS Zen Phone 2 which were digitally plotted at the time of sampling on Google Earth, Land Information New Zealand (LINZ) Rural Aerial Photo and LINZ Topo50 Topographic Map series</p>

Criteria	JORC Code explanation	Commentary
		<p>imagery.</p> <p>Geological Mapping – all mapping points have been recorded using Garmin GPSMAP 64s with expected accuracy of <math>\pm 2\text{m}</math> using New Zealand Transverse Mercator 2000 projection based on the New Zealand Geodetic Datum 2000 using the GRS80 reference ellipsoid.</p>
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li>• <i>Data spacing for reporting of Exploration Results.</i></li> <li>• <i>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.</i></li> <li>• <i>Whether sample compositing has been applied.</i></li> </ul>	<p>Airborne Resistivity Survey - Geophysical data used and interpreted in this report was sourced from the aeromagnetic survey flown by Fugro Airborne Surveys Pty. Ltd. for Glass Earth Gold Ltd. in Fugro; 2007; Airborne Geophysical Data; Ministry of Economic Development New Zealand Unpublished Mineral Report MR4327. Details of this survey including the data spacing are provided above in the Sampling Techniques section.</p> <p>Soil Sampling – Soil sampling was carried along lines planned by Dr MacKenzie to test conductivity highs. A wide line spacing has been used (in the order of 1km to 5km) given the early reconnaissance stage of exploration to date. Samples were collected at approximately 50m spacings along each line.</p> <p>Rock Chip Sampling – Rock Chip samples were taken irregularly at outcrops of interest identified during the soil sampling program. A systematic rock chip sampling program has not been undertaken.</p>
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <li>• <i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i></li> <li>• <i>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.</i></li> </ul>	<p>The east Otago Schist metamorphic basement contains a predominant geological and structural trend direction, northwest – southeast, related to pervasive polyphase metamorphic deformation.</p> <p>Airborne Resistivity Survey - Flight direction lines in the aeromagnetic survey were therefore oriented perpendicular to this geological trend and flown NE - SW at an azimuth of <math>45^\circ</math> to maximize coverage of the metamorphic and structural features in the basement rocks. Northwest-southeast tie lines were flown every 3km to allow for levelling of the survey data.</p> <p>Soil Sampling – Soil sampling lines are oriented perpendicular to the conductivity high lineaments being targeted – in most cases soil sampling lines are oriented NE (or ENE) targeting NW (or NNW) trending conductivity lineaments.</p>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>• <i>The measures taken to ensure sample security.</i></li> </ul>	<p>Soil and Rock Chip Sampling – most samples were analysed in the field at the point of sampling with pXRF with a small selection of samples later analysed at CRL Energy Ltd, Christchurch, NZ. All samples were stored under supervision of field geologists in the field including in locked storage overnight. All soil and rock chip samples are currently stored in a locked and alarmed store room at CRL Energy Ltd, Christchurch, NZ</p>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>• <i>The results of any audits or reviews of sampling techniques and data.</i></li> </ul>	<p>The Competent Person is unaware of any reviews or audits which may have been completed other than that</p>



Criteria	JORC Code explanation	Commentary
		undertaken by the Competent Person himself CRL soil sampling procedures in the field were reviewed by Dr Doug MacKenzie.

## Section 2: Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
<b>Mineral tenement and land tenure status</b>	<ul style="list-style-type: none"> <li>Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.</li> <li>The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.</li> </ul>	<p>The following two Prospecting Permits for gold and other minerals in Otago, New Zealand were granted by New Zealand Petroleum &amp; Minerals ("NZP&amp;M") on 17th October 2016 to New Age Exploration ("NAE"):</p> <ul style="list-style-type: none"> <li>Mahinerangi Permit Number 60254 covering an area 418 km<sup>2</sup></li> <li>Teviot Permit Number 60255 covering an area 458 km<sup>2</sup></li> </ul> <p>The Prospecting Permits are for an initial period of 2 years and the annual fee for both of the permits was increased in January 2017 from NZ\$3,140 p.a (excluding GST) to NZ\$51,00 p.a (excluding GST).</p> <p>On 27 July 2017 NAE lodged an application to NZP&amp;M for partial relinquishment of its Prospecting Permit areas as follows;</p> <ul style="list-style-type: none"> <li>Mahinerangi Permit reduced from 418 km<sup>2</sup> to 154 km<sup>2</sup></li> <li>Teviot Permit reduced from 458 km<sup>2</sup> to 66 km<sup>2</sup></li> </ul> <p>The 27 July 2017 application retains 25% of the total area of both permits and relinquishes 75% of the total area of both permits. The partial relinquishment application is expected to be accepted by NZP&amp;M in the coming weeks and is expected to reduce the annual permit holding costs from NZ\$51,000 p.a to approx. NZ\$13,000 p.a.</p> <p>Prospecting Permits allow only minimum impact prospecting activities to be undertaken such as; geological mapping, soil and rock chip sampling and aerial surveys. An Exploration Permit is required prior to any drilling being undertaken. Any Exploration Permit (which confers all or any of the same rights as a current Prospecting Permit in respect of all or part of the same land and the same minerals) may only be granted to a person other than the holder of the current permit with the prior written consent of the current permit holder.</p> <p>Surface land access consent from landowners is not required for the minimum impact exploration activities permissible under a prospecting permit however landowner notification prior to access is a requirement and has been provided prior to accessing properties for fieldwork undertaken.</p> <p>Activities greater than minimum impact activities, such as drilling under any subsequent Exploration Permit, require a formal access arrangement for private and public conservation land.</p> <p>Minor areas within both of the application areas are covered by public conservation areas where regional council resource consent for mining may be challenging however these areas are only a very small percentage</p>

Criteria	JORC Code explanation	Commentary
		<p>of the overall application area and are therefore not expected to be significant constraints. Permit holders require access consent (less strict than regional council resource consents and access arrangements) from the Department of Conservation (DOC) to conduct minimum impact activities on conservation land.</p> <p>Government royalties on gold mined in New Zealand are the higher of:</p> <p>(a) an ad valorem royalty of 2% of the net sales revenue of the minerals obtained under the permit; and</p> <p>(b) an accounting profits royalty of 10% of the accounting profits, or provisional accounting profits, as the case may be, of the minerals obtained under the permit.</p>
<p><i>Exploration done by other parties</i></p>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<p>While there has been some gold exploration undertaken over the application areas as described below, we are not aware of any modern exploration targeting shear zone hosted gold targets in the south of the Otago Schist belt within the application areas.</p> <p><u>Mahinerangi</u></p> <p>Alluvial gold prospecting was conducted in the Waipori area by Alluvial Tin Ltd and British Developments Ltd in the 1930's in Lammerlaw Creek and Waipori on the western boundary of the current application area.</p> <p>In the early 1970's a joint venture between Lime and Marble Ltd and AHI Minerals conducted prospecting inside a permit ~300 sqkm over the for tungsten and antimony in the Waipori area (inside the current application) and Lammerlaw Ranges (outside the western boundary of the current application area) using panned concentrates, stream sediment sampling, channel sampling and soil sample lines.</p> <p>Homestake New Zealand Exploration Ltd held an exploration permit in the Waipori area of 351sqkm which covered a similar area to the licences owned by Lime and Marble / AHI Minerals. BHP Gold Mines Ltd bought Homestake and it's exploration permit in the late 1980's. After the exploration permit expired BHP was subsequently granted two prospecting permits (totaling ~74sqkm) on the southern shore of Lake Mahinerangi (inside the current application area) and in the headwaters of Stony Creek in the Lammerlaw Ranges (outside the western boundary of the current application area). BHP conducted stream and rock chip sampling in these areas. Macraes Mining Company Limited bought these two prospecting licences in 1990 and conducted geological mapping, rock chip and soil sampling (Au, As, Cu, Pb, Zn, Sb and Hg) throughout the early to mid 1990's.</p> <p>Commonwealth Resources Ltd conducted prospecting over a ~32sqkm licence in the Waitahuna Heights area (southeastern corner of current application area) from 1996-1998 producing limited mapping and a small number of mineralised float assays.</p> <p>Recent exploration efforts in the area include alluvial gold prospecting by Kaipara Ltd at Mitchells Flat (~22sqkm immediately south of Lake Mahinerangi) and limited reconnaissance mapping by Hardie Resources Ltd for Middle Island Resources Ltd over the wider Lake Mahinerangi area and Lammerlaw Ranges (579sqkm).</p>



Criteria	JORC Code explanation	Commentary
		<p>Glass Earth held a prospecting permit over a very large area of Otago which included the Mahinerangi and the Teviot application areas (Glass Earth, 2010). Parts of the Mahinerangi Block within Glass Earth's prospecting permit were surrendered at stages throughout the permit. Glass Earth compiled legacy data, conducted a regional geophysical survey (Fugro, 2007) and subsequently completed regional geochemical sampling. Glass Earth completed little geochemical sampling in the Mahinerangi area before selling and leaving its South Island permits in 2013. Glass Earth (2010) references stream sampling conducted over the application area by Newmont. NAE has, as yet, been unable to locate the source report for this data.</p> <p><u>Teviot</u></p> <p>There has been little hard rock minerals exploration conducted in the Teviot Block application area.</p> <p>The Clutha River on the southern boundary of the Teviot Block has experienced small scale alluvial gold explorations and workings as has the Teviot River near the centre of the application area. There is little available data about these workings.</p> <p>Prospecting for alluvial gold was conducted near the northeast corner of the Teviot Block application area near Lake Onslow and the North Branch of the Teviot River in the 1930's.</p> <p>Early in the 2000's HPD New Zealand Ltd held a prospecting licence covering the Lake Onslow and Lammerlaw areas which included a small portion of the northeast corner of the Teviot Block application area. HPD commissioned a GIS analysis of historical rock chip, stream and soil sampling programs from earlier prospecting in the area. HPD was acquired by Glass Earth Ltd in 2006.</p>
<b>Geology</b>	<ul style="list-style-type: none"> <li>• <i>Deposit type, geological setting and style of mineralisation.</i></li> </ul>	<p>MacKenzie and Craw (2016) propose that the southwestern margin of the Otago Schist belt contains a block of Lower Greenschist Facies Schist containing NAE's southern shear zone targets that is analogous to and a geological 'mirror-image' of the northeastern Lower Greenschist Facies Schist block of the Otago Schist belt that hosts the HMSZ and the Macraes deposits. This research incorporates adjustments to the extent of the southwestern Lower Greenschist Facies Schist block and has demonstrated that regional structure in the schist basement of this block is much more complex than previously thought.</p> <p>Orogenic gold mineralisation such as that found along the HSMZ on the northeastern side of the Otago Schist belt may therefore also be present on the southwestern side of the Otago Schist belt within the NAE application areas.</p>
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <li>• <i>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:</i> <ul style="list-style-type: none"> <li>○ <i>easting and northing of the drill hole collar</i></li> <li>○ <i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i></li> <li>○ <i>dip and azimuth of the hole</i></li> </ul> </li> </ul>	<p>Not Applicable – no drillholes are included in the Exploration Results</p>

Criteria	JORC Code explanation	Commentary
	<ul style="list-style-type: none"> <li>○ down hole length and interception depth</li> <li>○ hole length.</li> <li>• 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.</li> </ul>	
<b>Data aggregation methods</b>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> <li>• The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	Not Applicable
<b>Relationship between mineralisation widths and intercept lengths</b>	<ul style="list-style-type: none"> <li>• These relationships are particularly important in the reporting of Exploration Results.</li> <li>• If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> <li>• 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').</li> </ul>	Not Applicable
<b>Diagrams</b>	<ul style="list-style-type: none"> <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> </ul>	Appropriate maps, plans, sections and other views of the interpreted mineralisation are included in the announcement.
<b>Balanced reporting</b>	<ul style="list-style-type: none"> <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> </ul>	The announcement presents all of the salient exploration data that supports the results presented and where summarised is done so in such a way as to convey all of the results in a balanced manner.
<b>Other substantive exploration data</b>	<ul style="list-style-type: none"> <li>• 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.</li> </ul>	All relevant information has been presented in the announcement.
<b>Further work</b>	<ul style="list-style-type: none"> <li>• The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>• Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	The announcement summarises the work programs proposed by NAE in their prospecting permits