

# Hoist EM Conductors & Structural Targets Identified at Gimlet

## HIGHLIGHTS

- Geophysical review of Gimlet Project completed
- Fifteen targets identified, including six high priority EM conductors
- Review of historical auger and soil geochemistry underway

Terrain Minerals Ltd (ASX:TMX) (“Terrain” or “the Company”) is pleased to announce that a recent review of available geophysical and structural data at its Gimlet Project, within the south-west portion of the Fraser Range Province, has resulted in the identification of fifteen discreet exploration targets of which six have been deemed to be of high priority and worthy of further investigation.

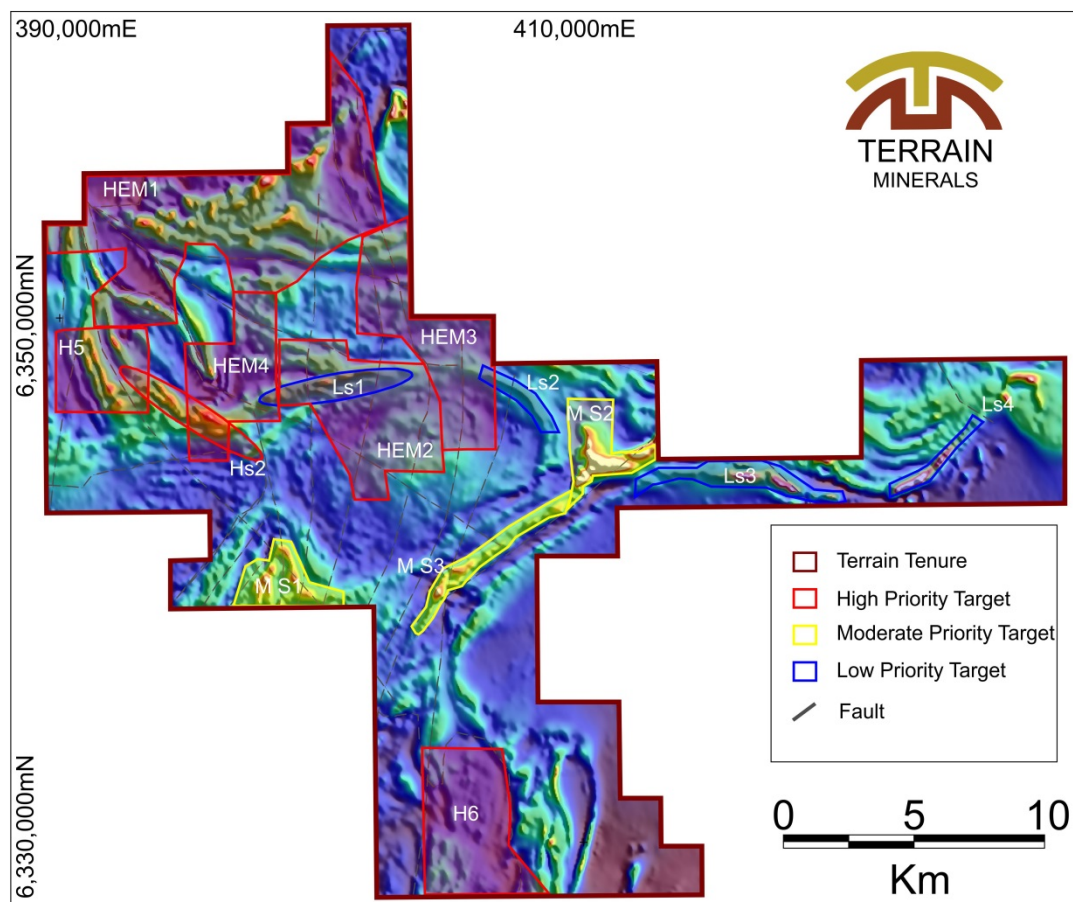


Figure 1: Targets and regional magnetics



The targets were derived from a review of transient electromagnetic (TEM) and aeromagnetic data combined with a new structural interpretation of the tenement. Review of aeromagnetic data in light of the structural interpretation, resulted in the identification of an additional nine targets of second and third order priority. Terrain's predecessors had evaluated the available geophysical coverages separately and for predominantly uranium and gold potential. It is through the evaluation of the multiple surveys and the differing targeting model that Terrain was able to identify these targets warranting further investigation.

### **Description of High Priority Targets:**

The six targets have been assigned an exploration priority based upon an empirical estimate of the depth of burial of the EM conductor and a subjective assessment of its structural setting.

- HEM1 is a series of up to 3 EM conductor anomalies which appear to coalesce at depth. The conductors sit on the northern side of a large scale NW-SE trending fault structure which transects the project area and intersects the Jerdacuttup fault at a high angle some 6 km north of the lease boundary.
- HEM2 is an EM conductor anomaly located at the centre of a large ring structure. The conductor anomaly sits at the intersection of a NNE-SSW trending fault with a NW-SE trending fault which marks the southern boundary of an interpreted NW-SE trending zone of extensional shear. The northern boundary of the interpreted zone of shear is marked by a NW-SE trending fault upon which the HEM1 EM anomalies appear to juxtapose.
- HEM3 is an EM conductor anomaly on the eastern side of the HEM1 series conductors and sits on the eastern side of an intersection between a curvilinear fault that swings from SSW- NNE trending to NNW-SSE as it transects the large ring structure hosting the HEM2 conductor at its centre.
- HEM4 is a shallow EM conductor anomaly on the north-western side and adjacent to the margin of the ring structure hosting HEM2. The anomaly sits on the northern side of the more southerly NW-SE fault and is adjacent to the interpreted NW-SE zone of extensional shear on its western side.
- HEM5 is a shallow EM conductor anomaly situated on the western side of the project area and situated between converging N-S and NW-SE trending faults.
- HEM6 is a an EM conductor in the south of the project area located adjacent to a NNW-SSE trending fault



## Further Work:

Further work programmes to be undertaken include a review of historical geochemical data and generation of a series of staged geochemical soil survey programmes to further evaluate the potential of the EM conductors and the attendant structural features with potential to host Ni –Cu mineralisation.

## For further information, contact:

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## About Terrain Minerals Limited:

Terrain Minerals Limited (ASX:TMX) is a minerals exploration company with a Western Australian based asset portfolio consisting of:

- Gimlet (Ni-Cu) - 469km<sup>2</sup> exploration licence located in the Fraser Range Province. Historical exploration data review and exploration targeting underway;
- Great Western (Au) - near term development opportunity, resource estimation and economic study process currently being conducted;

Through the combination of the two assets, Terrain has the potential of both near term cash flow and significant exploration upside.

## Competent Person Statement:

*The information in this Announcement that relates to Exploration Results was compiled by Mr Robert Jewson, who is a member of the Australian Institute of Geoscientists, and a consultant to Terrain Minerals limited. Mr Jewson 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, Minerals Resources and Ore Reserves'. Mr Jewson consents to the inclusion in the Report of the matters based on his information in the form and context in which it appears.*



**Disclaimer:**

*Information included in this release constitutes forward looking statements. Often, but not always, forward looking statements can generally be identified by the use of forward looking words such as “may”, “will”, “expect”, “intend”, “plan”, “estimate”, “anticipate”, “continue” and “guidance” or other similar words, and may include, without limitation, statements regarding plans, strategies and objectives of management, anticipated production or construction commencement dates and expected costs or production outputs.*

*Forward looking statements inherently involve known and unknown risks, uncertainties and other factors that may cause the company’s actual results, performance and achievements to differ materially from any future results, performance or achievements. Relevant factors may include, but are not limited to, changes in commodity prices, foreign exchange fluctuations and general economic conditions, increased costs and demand for production inputs, the speculative nature of exploration and project development, including the risks of obtaining necessary licences and permits and diminishing quantities or grades of reserves, political and social risks, changes to the regulatory framework within which the company operates or may in the future operate environmental conditions including extreme weather conditions, staffing and litigation*

*Forward looking statements are based on the company and its management’s assumptions made in good faith relating to the financial, market, regulatory and other relevant environments that exist and effect the company’s business operations in the future. Readers are cautioned not to place undue reliance on forward looking statements.*

*Forward looking statements are only current and relevant for the date of issue. Subject to any continuing obligations under applicable law or any relevant stock exchange listing rules, in providing this information the company does not undertake any obligation to publicly update or revise any of the forward looking statements or advise of any change in events, conditions or circumstances on which such statement is based.*



## JORC Code, 2012 Edition – Table 1

### Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Comments
<b>Sampling techniques</b>	<ul style="list-style-type: none"> <li>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.</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 (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.</li> </ul>	<ul style="list-style-type: none"> <li>Heliborne EM Geophysical Survey conducted in February 2007 on 200 m line spacing using Hoist EM by GPX Airborne Survey</li> <li>Survey carried out at a flight height of 90 metres with sensor at 35m</li> <li><b>Transmitter loop</b>, 5ms pulse on Time, 15ms Pulse off Time, 320 Amps pulse current, 1ms Switch on Ramp, 40 µs switch of ramp, TX loop area of 340m<sup>2</sup>, 108,800 NIA peak dipole movement, <b>Receiver Loop</b>:124 linear channels (12 channels from 54 microseconds after switch off -25 microseconds wide., then 112 channels to 13 milliseconds -113 microseconds wide, 45,000Hz bandwidth, along line sample interval between 8 to 10m</li> <li>real time GPS navigation system provides in flight accuracy of 3m and up to 1.2m depending on satellite coverage</li> <li>Altitude measured with accuracy of 1m</li> <li>HoistEM was calibrated prior to the survey at a testing site in the Goldfields</li> </ul>
<b>Drilling techniques</b>	<ul style="list-style-type: none"> <li>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).</li> </ul>	<ul style="list-style-type: none"> <li>N/A no drilling reported</li> </ul>
<b>Drill sample recovery</b>	<ul style="list-style-type: none"> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> </ul>	<ul style="list-style-type: none"> <li>N/A no drilling reported</li> </ul>
	<ul style="list-style-type: none"> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>
	<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>	<ul style="list-style-type: none"> <li>A N/A</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> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>
	<ul style="list-style-type: none"> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>
	<ul style="list-style-type: none"> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>
<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> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>
	<ul style="list-style-type: none"> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>





	<ul style="list-style-type: none"> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>
	<ul style="list-style-type: none"> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>
	<ul style="list-style-type: none"> <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> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>
	<ul style="list-style-type: none"> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	<ul style="list-style-type: none"> <li>N/A</li> </ul>
<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>	<ul style="list-style-type: none"> <li>EM Measurements taken using HoistEM system</li> <li>HoistEM system calibrated prior to the commencement of the survey at testing sites in the Goldfields</li> <li>All digital data obtained was inspected on a daily basis to ensure that no errors were present and to identify any missing data sections</li> <li>A preliminary flight path map was plotted and checked against survey specifications</li> <li>Data presented is reprocessed raw data which underwent QAQC validation of integrity</li> </ul>
<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>	<ul style="list-style-type: none"> <li>Data was recorded GPX Airborne acquisition systems onto PCMICIA flash card</li> <li>All digital data was inspected on a daily basis to identify any missing data sections and determine if there was any errors with the capture</li> <li>A preliminary flight path was plotted and validated against the survey specifications.</li> <li>The data was levelled and processed by Southern Geoscience using industry standard methods for geophysical processing</li> </ul>
<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>	<ul style="list-style-type: none"> <li>Real time GPS navigation system utilising the Novatel WAAS enable OEM4-G2-3151W GPS receiver providing an in-flight accuracy of 3m and up to 1.2,m depending on the satellite coverage available</li> <li>Altitude was measured with an accuracy of 1m</li> <li>A preliminary flight path was plotted daily and checked against the survey specifications</li> </ul>
<b>Data spacing and distribution</b>	<ul style="list-style-type: none"> <li>Data spacing for reporting of Exploration Results.</li> <li>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.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul style="list-style-type: none"> <li>Readings were recorded at 8-10m intervals along flight lines 200m apart</li> <li>Line spacing of 200m is believed to be sufficient to identify anomalies warranting further investigation</li> <li>Ground EM or alternatively 100m line spaced VTEM will be utilised to infill areas requiring additional resolution</li> </ul>
<b>Orientation of data in relation to geological structure</b>	<ul style="list-style-type: none"> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.</li> </ul>	<ul style="list-style-type: none"> <li>Multiple structural and lithological trend orientations occur within the survey area, thus it was elected to fly on an east west orientation with north south tie lines. Detailed infill or ground EM surveys will be optimised in terms of grid orientation with respect to each target</li> </ul>
<b>Sample security</b>	<ul style="list-style-type: none"> <li>The measures taken to ensure sample security.</li> </ul>	<ul style="list-style-type: none"> <li>All data acquired by GPX Airborne was reported to Company representatives</li> </ul>
<b>Audits or reviews</b>	<ul style="list-style-type: none"> <li>The results of any audits or reviews of sampling techniques and data.</li> </ul>	<ul style="list-style-type: none"> <li>As part of Southern Geoscience's reprocessing, a review was conducted of the prior processed data. All information outputs adhered to industry best practices</li> </ul>



## Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

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>	<ul style="list-style-type: none"> <li>E63/1740 located in the Dundas mineral field. The tenement is 100% held by Terrain Minerals Limited</li> <li>The tenure is secure and in good standing at the time of writing</li> </ul>
<b>Exploration done by other parties</b>	<ul style="list-style-type: none"> <li>Acknowledgment and appraisal of exploration by other parties.</li> </ul>	<ul style="list-style-type: none"> <li>Historical exploration has been undertaken for Gold by Anglo Gold Ashanti and for Uranium by Nova Energy</li> </ul>
<b>Geology</b>	<ul style="list-style-type: none"> <li>Deposit type, geological setting and style of mineralisation.</li> </ul>	<ul style="list-style-type: none"> <li>The Gimlet project is located in the southern portion of the Proterozoic Albany Fraser mobile belt.</li> <li>Terrain is primarily exploring for magmatic hosted Nickel-Copper Sulphide mineralisation</li> </ul>
<b>Drill hole Information</b>	<ul style="list-style-type: none"> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes: <ul style="list-style-type: none"> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </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>	<ul style="list-style-type: none"> <li>N/A</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>	<ul style="list-style-type: none"> <li>N/A</li> </ul>

<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 (e.g. 'down hole length, true width not known').</li> </ul>	<ul style="list-style-type: none"> <li>• N/A</li> </ul>
<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>	<ul style="list-style-type: none"> <li>• N/A</li> </ul>
<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>	<ul style="list-style-type: none"> <li>• N/A</li> </ul>
<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>	<ul style="list-style-type: none"> <li>• The Company's previous ASX releases have detailed the previous work undertaken by Terrain across the project area. Further releases will be made as additional information is reviewed</li> </ul>
<b>Further work</b>	<ul style="list-style-type: none"> <li>· The nature and scale of planned further work (e.g. 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>	<ul style="list-style-type: none"> <li>• Soil geochemical and auger drilling programs are being planned at present and will be conducted across the prospective targets. A review of all available historical drilling and geochemical data is currently underway and further releases will be made to market when the information has been captured and reviewed.</li> <li>• Relevant maps and plans have been provided illustrating the location and the targeting rationale applied</li> </ul>