



**ASX Announcement | 28 October 2020**  
**Rafaella Resources Limited (ASX:RFR)**

**Geophysical data review shows multiple prospects at the Midrim Ni-Cu-PGE deposit -  
REVISED**

*This announcement replaces the announcement released on 22 October 2020, and now includes a Competent Person's Statement and sections 1 and 2 of JORC Table 1*

**Investment Highlights**

- Southern Geoscience Consultants has completed their initial review of the first of the Canadian high-grade Ni-Cu-PGE projects currently subject to a conditional sale agreement.
- Ten shallow level anomalies have been identified in addition to the known mineralisation at Midrim and Lac Croche.
- These anomalies are favorably associated with elevated magnetics which enhances their prospectivity.
- The Priority 1 and Priority 2 targets defined are on the western margin of a very significant zone of elevated magnetics, about 1.5km in east-west dimension that corresponds with documented gabbro-anorthosite intrusive rocks.
- New heli-borne EM (HEM) surveys are planned for late 2020 to follow up on these prospects.

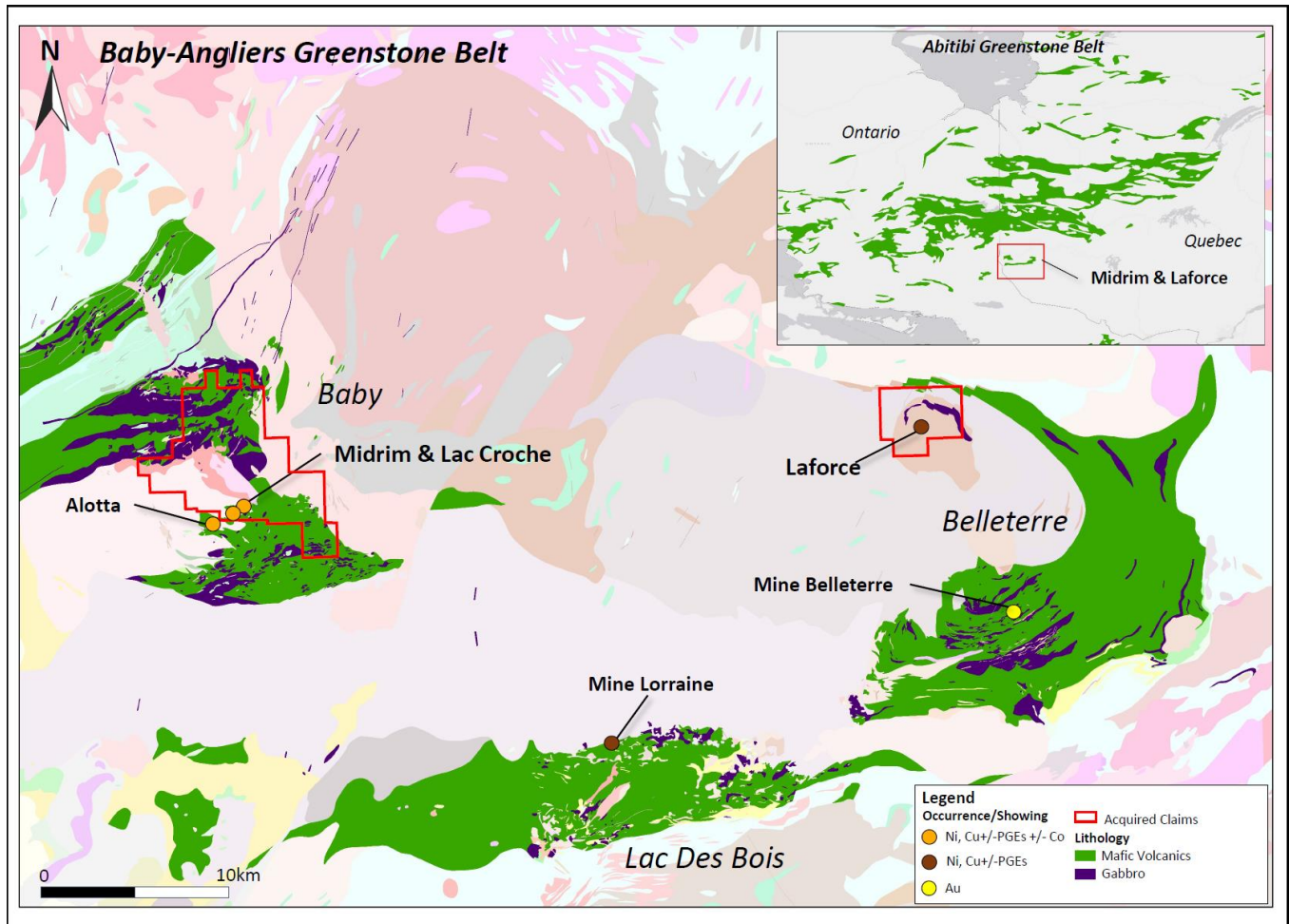
**Rafaella Resources Limited (ASX:RFR) ("Rafaella" or "the Company")** is pleased to provide initial findings from the geophysical review being undertaken by Southern Geoscience Consultants ('SGC') on the Midrim and Laforce Ni-Cu-PGE deposits (the 'Projects') located in the highly prospective Belleterre-Angliers Greenstone Belt located in the Province of Quebec, Canada (**Figure 1**). The Projects are the subject of a conditional acquisition agreement between the Company and Meteoric Resources NL<sup>1</sup>.

As previously disclosed<sup>2</sup>, the Projects benefit from exceptionally high-grade intercepts including intersections at the Midrim Deposit from drilling conducted, including:

- **4.3m @ 6.57% Ni, 5.15% Cu & 7.15g/t PGEs** from 57.15m depth in hole MR00-05;
- **4.6m @ 5.97% Ni, 4.91% Cu & 3.38g/t PGEs** from 48.00m depth in hole MR00-37; and
- **9.4m @ 3.52% Ni, 4.25% Cu & 4.59g/t PGEs** from 56m depth in hole MR17-01

<sup>1</sup> See ASX announcement "Agreement to Acquire High-Grade Nickel-Copper Sulphide Projects in Canada and ~1.2M Private Placement Completed" dated 21 August 2020.

<sup>2</sup> See ASX announcement "Agreement to Acquire High-Grade Nickel-Copper Sulphide Projects in Canada and ~1.2M Private Placement Completed" dated 21 August 2020.

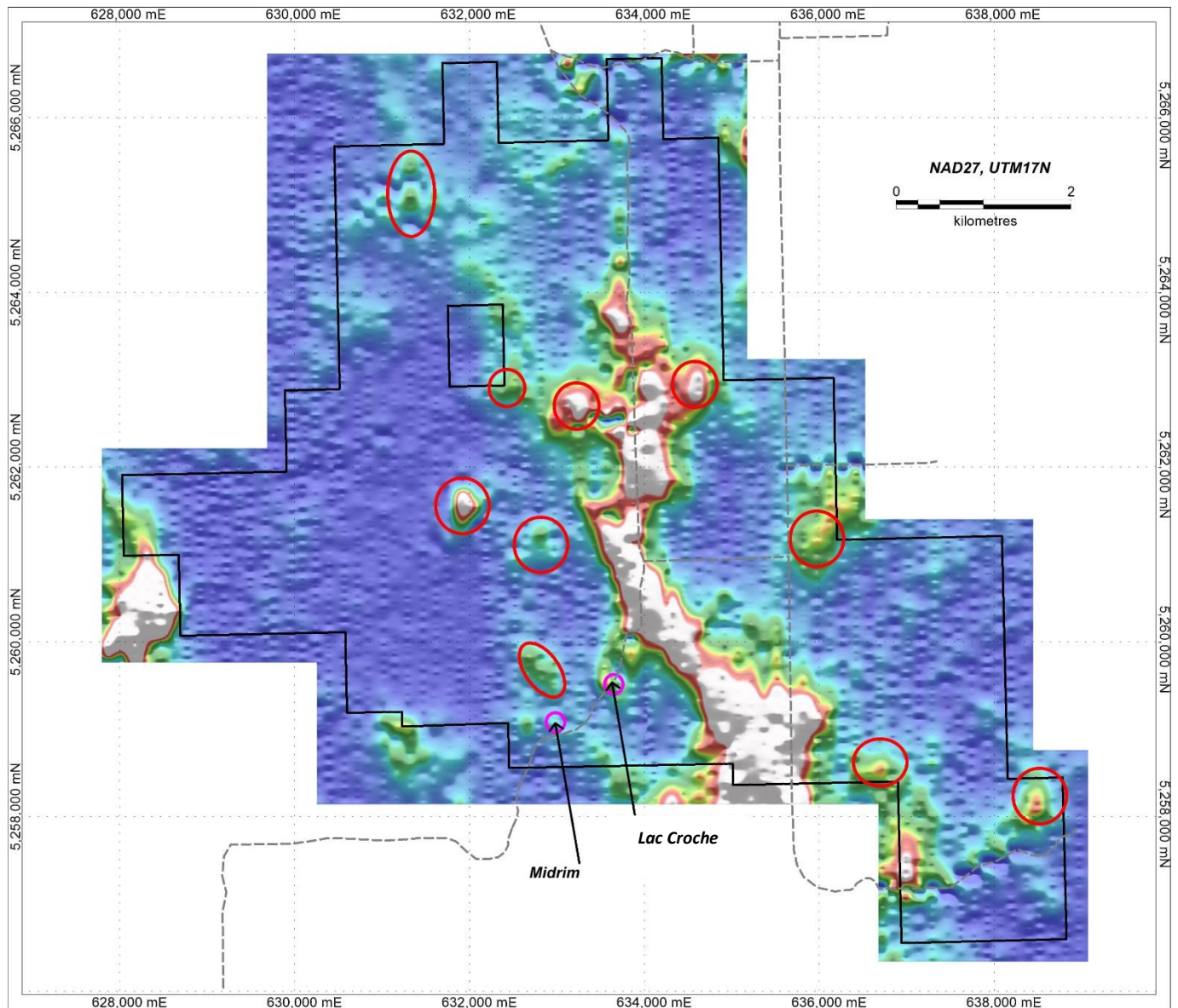


**Figure 1: Temiscamingue Regional Geology of the Midrim and Laforce Projects in the Belleterre Angliers Greenstone Belt**

The review efforts have been greatly aided by MegaTEM data previously not available to the Company. SGC notes that the previously flown MegaTEM survey (2001 vintage) is a high frequency (90Hz) airborne EM system flown at a relatively high altitude of about 120m (or higher in areas of steep terrain). With the rapid advancement of geophysical systems this approach is not deemed to be the most appropriate airborne EM system to assist exploration for intrusive hosted Ni-Cu-PGM mineralisation. The effective depth penetration of this previously flown MegaTEM survey is far less effective than more modern and powerful surveys (HEM) searching for much larger conductive ore bodies at depth within the tenement area. However, the historic MegaTEM surveying was successful in discovering the known, shallow level high-grade deposits' of Midrim and Laforce and therefore has been useful in validating the proof of concept as highlighted by CSA Global in their review<sup>3</sup>.

<sup>3</sup> See ASX announcement "Due Diligence Finds Strong Encouragement for Exploration at Midrim and LaForce Ni-Cu-PGE Projects" dated 21 September 2020.

Review and re-processing efforts by SGC have highlighted up to ten new, untested anomalies (**Figure 2**).



**Figure 2 – MegaTEM reprocessed data identifying new prospects**

Subject to completion of the acquisition, the Company plans to further review and test these prospect locations for the potential to add to the already well-endowed surface deposits of Midrim and Laforce. Any new near surface Ni-Cu-PGM discoveries here would greatly add to the economics of these deposits and further assist in the identification of the extent of potential intrusive hosts.

SGC has recommended that the Company:

- Fly the project areas of primary interest using the latest survey systems at a considerably lower frequency - high powered HEM system (i.e. 40m terrain clearance and using a system such as HeliTEM, VTEM or SKYTEM at 7.5-15 Hz base frequency);
- Follow-up the Heliborne EM with ground reconnaissance / sampling and ground gravity and /or ground EM if access allows; and
- Continue with the re-processing of the Laforce 2005 VTEM data, including modelling and interpretation of the regional magnetics.

**Rafaella's Managing Director Steven Turner said:** "The review by SGC strongly supports the initial findings by CSA Global that the Midrim and Laforce high grade nickel-copper-PGE deposits offer exceptional upside to the Company. SGC have confirmed that prior work, although extensive, has not been effective given the relatively shallow penetration of previous airborne EM coverage and therefore significant potential may have been overlooked. Rafaella intends to act upon the SGC recommendations following the acquisition of the Project, that remains subject to the shareholder meeting on October 29<sup>th</sup>. We believe that significant additional value can be realized through this approach for a modest initial budget. We are very excited and fortunate to have secured these high-grade high-potential nickel sulphide deposits at a time when the world is recognizing the growing importance of this key commodity."

This announcement has been authorised by the Board of Directors of the Company.

**Ends**

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**About Rafaella Resources**

Rafaella Resources Limited (ASX:RFR) is an explorer and developer of world-class mineral deposits worldwide. Rafaella owns the Santa Comba tungsten and tin development project in Spain and the McCleery cobalt and copper exploration project in Canada. Santa Comba is located in a productive tungsten and tin province adjacent to critical infrastructure and the McCleery project was previously under-explored and holds significant potential.

To learn more please visit: [www.rafaellaresources.com.au](http://www.rafaellaresources.com.au)

**About Southern Geoscience Consultants**

Southern Geoscience Consultants (SGC) is a group of highly experienced geophysicists based in Perth, Western Australia, who provide independent, specialised consulting services to the mineral and petroleum exploration industries globally.

SGC works with all types of geoscientific data, and expertise includes the planning, management, quality control, processing, imaging and interpretation of geophysical surveys, management of exploration programs, targeting and design of drill holes, GIS and database compilations, project evaluations, regional targeting studies, sales of multi-client data and value-added products, instrument rentals, rock property measurements and software development. SGC staff and consultants have considerable experience in the exploration of nickel-sulfide orebodies and the use of EM survey for targeting massive sulfides.

To learn more please visit: <https://sgc.com.au/>



**Forward Looking Statements Disclaimer**

This announcement contains forward-looking statements that involve a number of risks and uncertainties. These forward-looking statements are expressed in good faith and believed to have a reasonable basis. These statements reflect current expectations, intentions or strategies regarding the future and assumptions based on currently available information. Should one or more of the risks or uncertainties materialise, or should underlying assumptions prove incorrect, actual results may vary from the expectations, intentions and strategies described in this announcement. No obligation is assumed to update forward looking statements if these beliefs, opinions and estimates should change or to reflect other future development.

**Competent Person Statement**

The information in this announcement that relates to Geophysical Exploration Results is based on information compiled by Mr Russell Mortimer, who is employed as a Consultant to the Company through geophysical consultancy Southern Geoscience Consultants Pty Ltd. Mr Mortimer is a member of the Australian Institute of Geoscientists (AIG) and a member of the Australian Society of Exploration Geophysicists (ASEG) and has sufficient experience of relevance to the styles of mineralisation and the types of deposits under consideration, and activities undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Mortimer consents to the inclusion in the report of matters based on information in the form and context in which it appears.

## APPENDIX 1: JORC CODE, 2012 EDITION- SECTION 1- MIDRIM PROJECT 2017

### DRILLING PROGRAM

#### 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><i>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.</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 (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.</i></li> </ul>	<ul style="list-style-type: none"> <li>MegaTEM 2001 airborne electromagnetic and magnetic survey:</li> <li>The survey was conducted at a mean terrain clearance of 120 metres using a helicopter towed array transmitter / receiver loop.</li> <li>Line spacing was 150 metres.</li> <li>A total of ~450 km of surveying was performed covering an area of approximately 68 km<sup>2</sup>.</li> <li>System Specifications: 90Hz Base Frequency X, Y, Z component data B-field and dB/dt broadband measurements &gt;2,000,000 Am<sup>2</sup> - dipole moment</li> </ul>
<b>Drilling techniques</b>	<i>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).</i>	<ul style="list-style-type: none"> <li>Not applicable to geophysical survey.</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> <li>• Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <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>• Not applicable to geophysical survey.</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>	<ul style="list-style-type: none"> <li>• Not applicable to geophysical survey.</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> <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>	<ul style="list-style-type: none"> <li>• Not applicable to geophysical survey.</li> </ul>

Criteria	JORC Code explanation	Comments
<b>Quality of assay data and laboratory tests</b>	<ul style="list-style-type: none"> <li><i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i></li> <li><i>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.</i></li> <li><i>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.</i></li> </ul>	<ul style="list-style-type: none"> <li>The MegaTEM survey was undertaken during 2001 by Fugro Airborne Surveys, an independent geophysical contractor/service provider.</li> <li>The survey involved acquisition of airborne data at 150m line spacing.</li> <li>A total of approximately 450 line-km was completed during the survey.</li> <li>Nominal survey altitudes were of approximately 120m.</li> <li>The survey covered an area of approximately 68km<sup>2</sup>.</li> </ul> <p>Review of the data can be summarised by:</p> <ul style="list-style-type: none"> <li>Data quality was considered to be of standard/sufficient quality to pass contractor QA/QC checks.</li> </ul>
<b>Verification of sampling and assaying</b>	<ul style="list-style-type: none"> <li><i>The verification of significant intersections by either independent or alternative company personnel.</i></li> <li><i>The use of twinned holes.</i></li> <li><i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i></li> <li><i>Discuss any adjustment to assay data.</i></li> </ul>	<ul style="list-style-type: none"> <li>Not applicable to geophysical survey.</li> </ul>
<b>Location of data points</b>	<ul style="list-style-type: none"> <li><i>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.</i></li> <li><i>Specification of the grid system used.</i></li> <li><i>Quality and adequacy of topographic control.</i></li> </ul>	<ul style="list-style-type: none"> <li>The MegaTEM survey coordinates are in NAD27 UTM zone 17N coordinates.</li> <li>Drill hole location not applicable to geophysical</li> </ul>
<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> </ul>	<ul style="list-style-type: none"> <li>The MegaTEM survey involved acquisition of airborne data at 150m line spacing.</li> <li>Sample compositing not applicable to geophysical survey</li> </ul>



Criteria	JORC Code explanation	Comments
<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>The MegaTEM survey involved acquisition utilizing flight lines were orientated approximately perpendicular to the dominant stratigraphic and structural trend.</li> </ul>
<b>Sample security</b>	The measures taken to ensure sample security.	<ul style="list-style-type: none"> <li>Not applicable to geophysical survey.</li> </ul>
<b>Audits or reviews</b>	The results of any audits or reviews of sampling techniques and data.	<ul style="list-style-type: none"> <li>All digital Airborne Electromagnetic and Magnetic data was subjected to rigorous auditing and vetting by the independent geophysical contractor/service provider and data manager Fugro Airborne Surveys.</li> </ul>