

## Major Geophysical Breakthrough at Springfield Confirms District-Scale Tungsten System Potential

### Highlights

- **District-Scale Magnetic System Defined:** Independent geophysical interpretation by Mitre Geophysics confirms a strong spatial relationship between a newly defined, regional-scale magnetic anomaly and the historic Springfield tungsten mine.
- **Large, Coherent Magnetic Feature Identified:** High-resolution airborne magnetic data delineates a coherent and continuous magnetic anomaly extending approximately 2.9 kilometres along strike and up to 600 metres width, significantly exceeding the footprint of historical mining.
- **Highly Prospective Geological Interpretation:** The magnetic anomaly is interpreted to represent either a previously unrecognised metasedimentary roof pendant within the Idaho Batholith or a sulphide-rich zone dominated by pyrrhotite, both considered highly prospective for tungsten mineralisation.
- **Scheelite-Pyrrhotite Genetic Link Confirmed:** Independent petrographic studies confirm that tungsten mineralisation at Springfield occurs as primary scheelite and is spatially and temporally associated with pyrrhotite-dominant sulphide mineralisation, supporting a genetically linked hydrothermal system (ASX: PMM 20/01/2026)
- **Pyrrhotite Established as Key Geophysical Proxy:** Textural relationships show scheelite precipitation occurred contemporaneously with, or slightly prior to, pyrrhotite mineralisation, establishing pyrrhotite as a primary carrier and magnetic proxy for tungsten mineralisation at Springfield
- **High-Grade Tungsten Skarn Confirmed:** Rock chip sampling confirms a robust reduced tungsten skarn system with multiple high-grade results up to 2.98% WO<sub>3</sub>, spatially coincident with the interpreted magnetic feature (ASX: PMM 01/12/2025)
- **Clear Geological Explanation for Magnetic Response:** The close spatial association between scheelite-bearing skarn mineralisation, massive pyrrhotite and the regional magnetic anomaly provides a clear geological explanation for the strong magnetic response observed at Springfield.
- **Limited Historical Testing Highlights Upside:** Interpretation indicates historical mining tested only a small portion of a much larger mineralised system, with the majority of the magnetic feature remaining untested by modern exploration.
- **Analogy to Globally Recognised Deposit** Geological setting, mineral assemblage and magnetic response show similarities to the Dolphin tungsten deposit on King Island<sup>1</sup>, Tasmania, a world class scheelite skarn system.
- **Material Upgrade to Project Scale:** Recognition of a regional-scale magnetic feature interpreted to represent either a roof pendant or extensive pyrrhotite-rich skarn materially upgrades the scale potential of the Springfield Prospect and supports the presence of a district-scale tungsten system.
- **Priority Target within US Critical Minerals Portfolio:** Results materially enhance exploration upside at Springfield and elevate the prospect to a priority target within Pioneer's US-focused critical minerals portfolio.

<sup>1</sup> <https://g6m.com.au/dolphin-project/overview> Note: The company is making a geological and geophysical comparison and does not imply any comparison to resource size, grade or production

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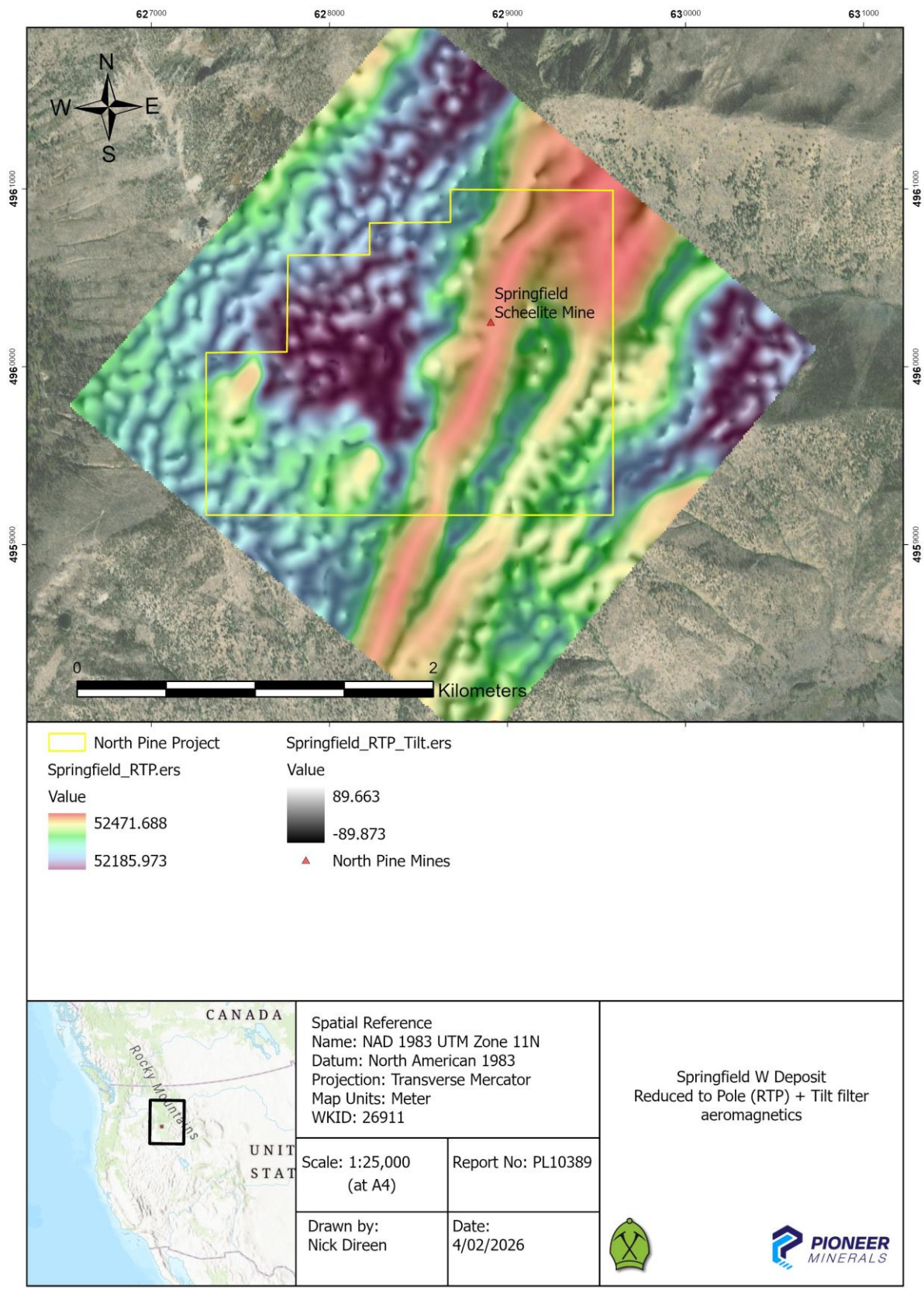


Figure 1: RTP magnetics plus tilt derivative of newly acquired data showing the large-scale magnetic anomaly interpreted to be either a previously unrecognised metasedimentary roof pendant or sulphide rich zone dominated by pyrrhotite.



Pioneer Minerals Limited (ASX Code: **PMM**) ('**Pioneer**' or '**the Company**') is pleased to report the results of an independent geophysical interpretation completed by Mitre Geophysics Pty Ltd following the completion of a high-resolution airborne magnetic and radiometric survey across the North Pine Project in Idaho, USA.

The interpretation integrates the newly acquired airborne datasets with historical geological information, recent rock chip sampling and independent petrographic studies completed at the Springfield Prospect. This work significantly improves the Company's understanding of the geological controls on mineralisation and confirms Springfield as a large, coherent tungsten system rather than an isolated, discrete historical occurrence.

The integration of high-resolution geophysics with recent petrographic studies and rock chip geochemistry demonstrates that the newly identified district-scale magnetic anomaly represents the geophysical expression of the Springfield tungsten system, driven by the close spatial and genetic association between scheelite mineralisation, pyrrhotite-dominant sulphides and skarn alteration.

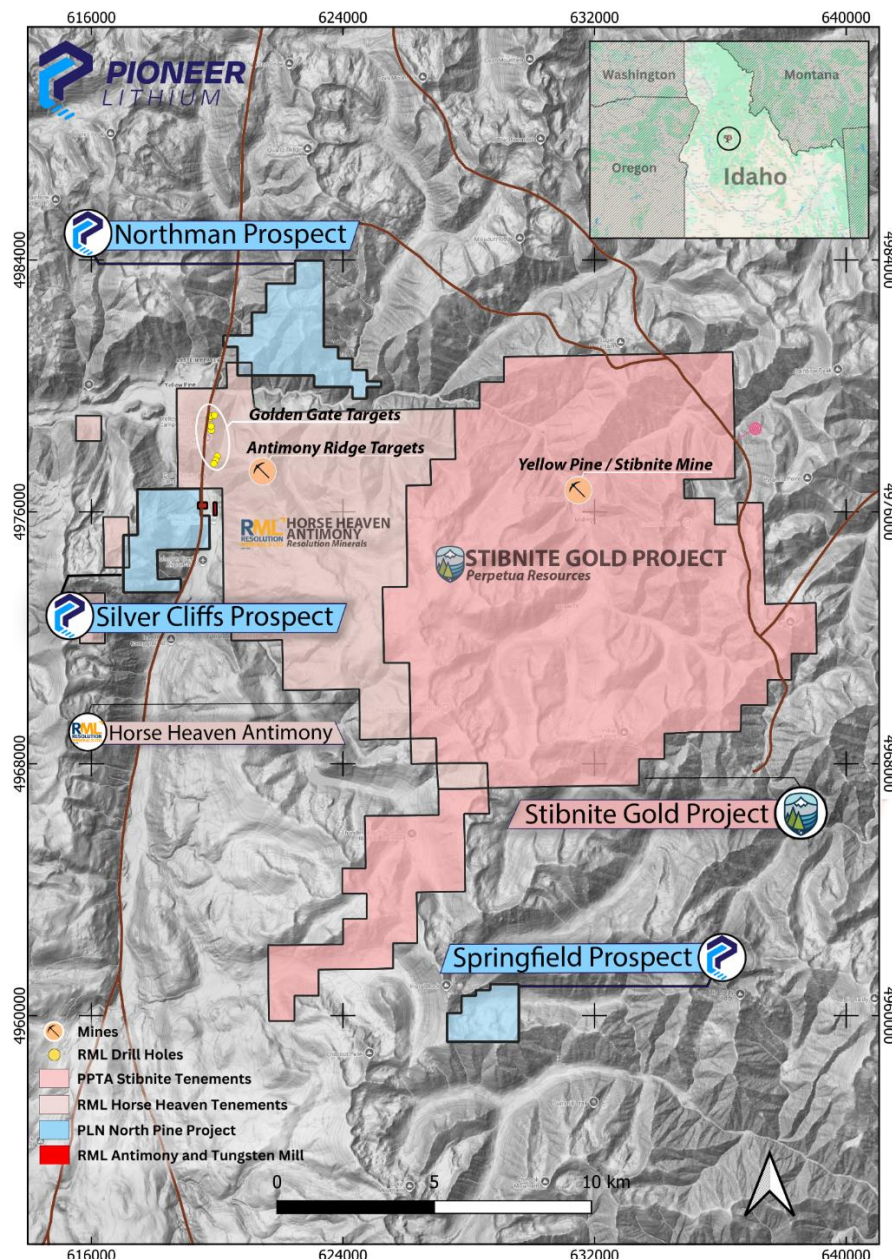


Figure 2: Showing the Location of the North Pine Project and prospect areas nearby to Perpetua Resources, Stibnite Gold Project and Resolution Minerals, Horse Heaven Antimony Project.

## Springfield Prospect – Geophysical Interpretation

The Springfield Prospect lies within the Idaho Batholith and hosts historic scheelite bearing tungsten workings. Prior to the recent airborne survey, publicly available magnetic data showed only a broad, poorly resolved magnetic response across the area, limiting geological interpretation and effective targeting.

The newly acquired high-resolution airborne magnetic data reveals substantial internal structure and lithological variation within the Springfield area. The data clearly differentiates weakly magnetic granitic rocks of the Idaho Batholith from strongly magnetic, folded and laterally continuous units interpreted to represent metasedimentary roof pendants within the granite, likely belonging to the Windermere Supergroup.

The strongest magnetic responses coincide spatially with the historic Springfield mine and with areas returning high-grade tungsten rock chip results. The interpreted magnetic feature extends for approximately 2.9 kilometres along strike and reaches up to approximately 600 metres in width, indicating that historical mining activity tested only a small portion of a much larger mineralised system

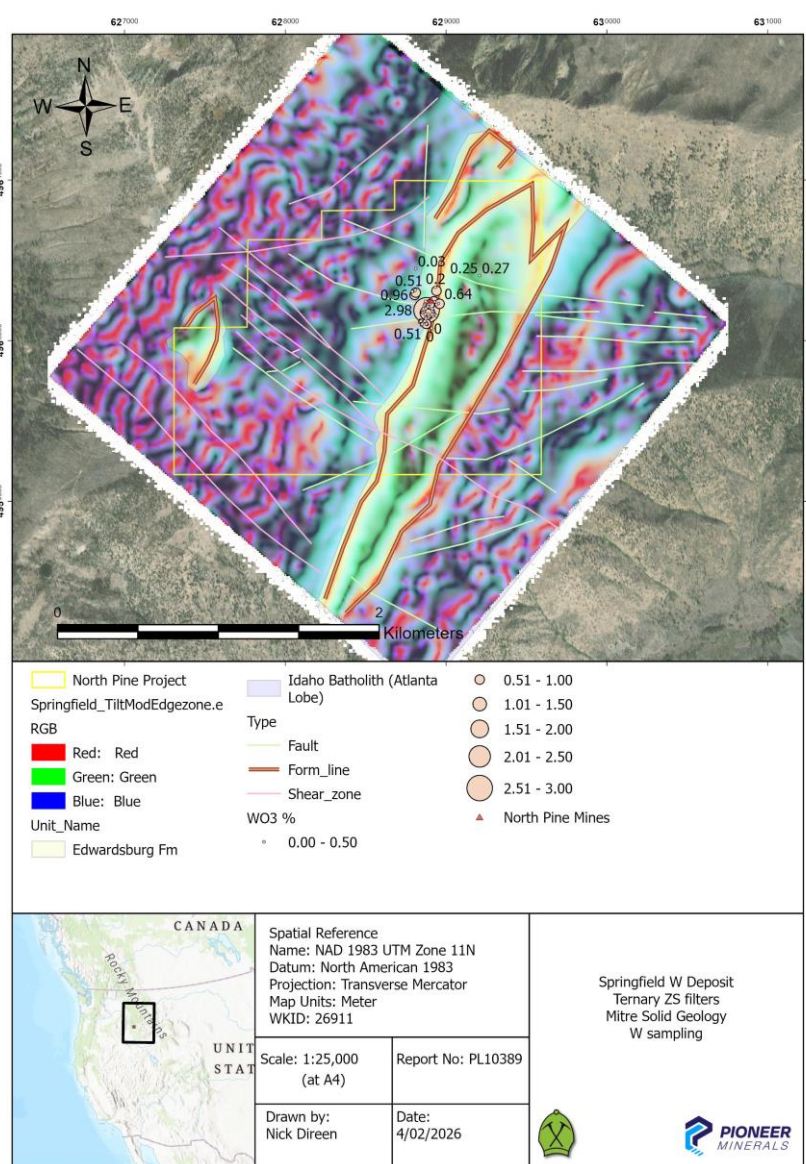


Figure 3: Ternary image of ZS tilt, modulus and edge zone filters with solid geology interpretation by Mitre Geophysics and WO<sub>3</sub> rock chip sample values.



### Geological Interpretation and Mineralisation Model

Independent petrographic studies confirm that tungsten mineralisation at Springfield occurs as primary scheelite across multiple lithological and textural settings. Scheelite is consistently associated with pyrrhotite-dominant sulphide mineralisation, with textural relationships indicating a close temporal and genetic link between the two mineral phases.

The dominant sulphide mineral identified is pyrrhotite, with minor chalcopyrite and pyrite. In several samples, pyrrhotite rims scheelite grains or infills fractures within scheelite, demonstrating that sulphide mineralisation was contemporaneous with, or immediately followed, tungsten deposition.

These relationships confirm that pyrrhotite is an integral component of the tungsten mineralising system at Springfield. Given the strongly magnetic nature of pyrrhotite, its presence provides a direct and physically explainable cause for the newly identified regional magnetic anomaly.

Structural interpretation indicates that the Springfield area has been affected by multiple generations of faulting and brecciation. These structures are interpreted to have controlled fluid flow and skarn development and may have offset or repeated mineralised horizons along strike.

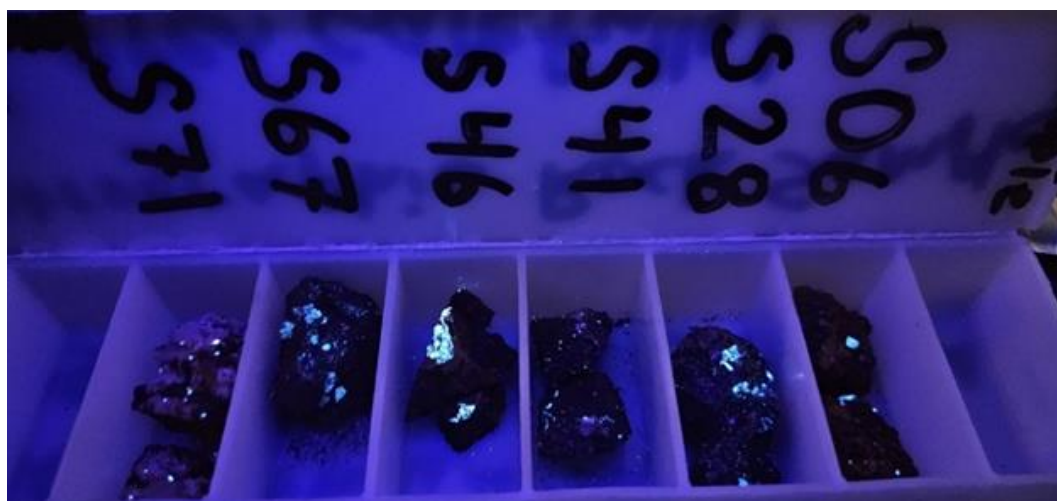


Figure 4: High Grade Scheelite tungsten mineralisation shown under shortwave UV light in samples selected for petrographic description (ASX: PMM 01/12/2025)



Figure 5: Sample 41 of appendix B ASX: PMM 01/12/2025 shows the clastic material in this sample is composed of transparent medium-grained quartz, small, black-coloured flakes interpreted as biotite, and light orange to pink-coloured blocky scheelite grains. These clasts sit within a matrix composed entirely of pyrrhotite.

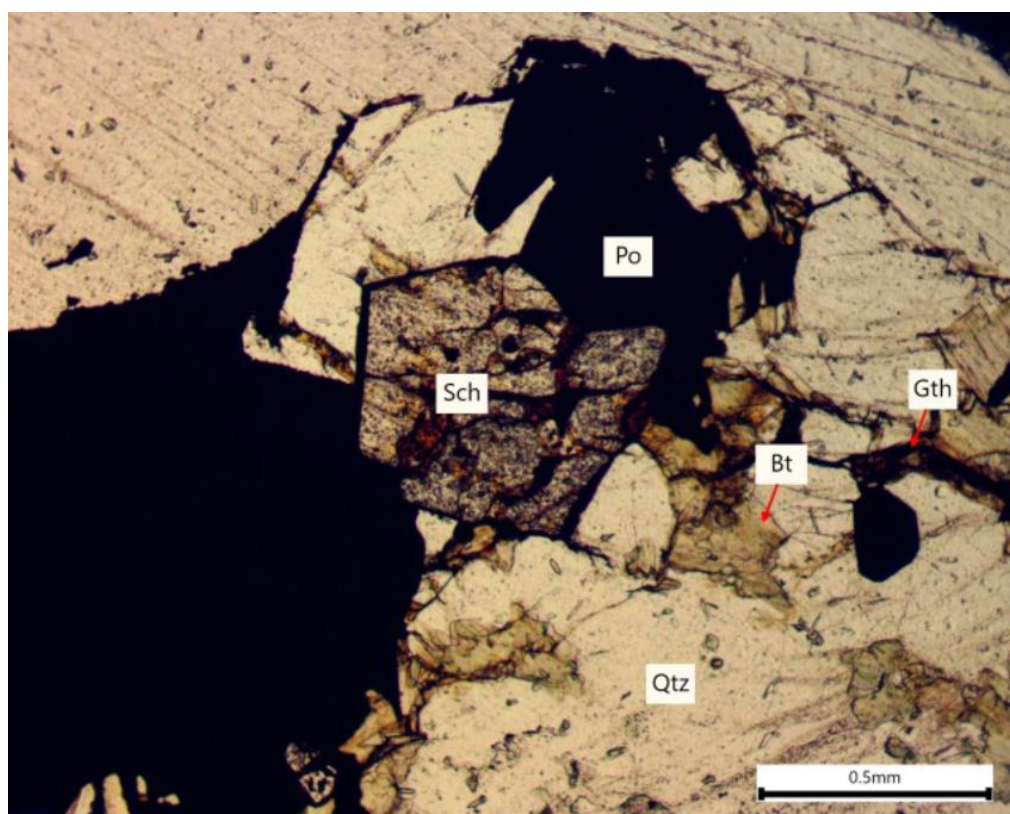


Figure 6: Petrographic image from sample 41 showing a single scheelite grain located on the margin of a quartz dominated clast and with strong pyrrhotite association. Sample 41 returned 0.51% WO<sub>3</sub> (ASX: PMM 01/12/2025)  
 Sch = scheelite, Po = pyrrhotite, Qtz = quartz, Gth = goethite, Bt = Biotite.

### Analogy to Dolphin Tungsten Deposit

The geological setting, mineral assemblage and geophysical response at Springfield show strong similarities to the Dolphin tungsten mine on King Island, Tasmania. Dolphin is a globally recognised scheelite skarn system characterised by strata bound tungsten mineralisation hosted within carbonate-rich units and associated with sulphide development.

### Exploration Upside and Strategic Implications

The significance of this interpretation lies in the clear linkage between geology, mineralisation and geophysics. Petrographic studies confirm that scheelite mineralisation at Springfield is intimately associated with pyrrhotite-dominant sulphides, while surface sampling demonstrates that this mineral assemblage hosts high-grade tungsten skarn mineralisation.

Pyrrhotite is a strongly magnetic mineral, and its presence provides a direct and physically explainable cause for the newly resolved regional magnetic anomaly. The scale and continuity of this anomaly therefore imply that the tungsten-bearing system at Springfield extends well beyond the limits of historical mining and surface exposure.

This relationship provides Pioneer with a powerful exploration vector, allowing the Company to use magnetics to target tungsten mineralisation at a district scale, rather than relying solely on isolated surface occurrences.

### Silver Cliffs Prospect – Geophysical Interpretation

The Silver Cliffs Prospect is located within the central portion of the North Pine Project and is situated on a regional magnetic gradient adjacent to the Johnson Creek valley. Prior to the recent high-resolution airborne survey, geological understanding of the area was limited by poor exposure, transported cover and reliance on low-resolution public-domain geophysical data.

The new high-resolution airborne magnetic data reveal a significantly more complex geological framework than previously recognised. The dominant magnetic signature across much of the area is characterised by a weakly magnetic, high-frequency texture interpreted to represent granitic rocks of the Idaho Batholith. Superimposed on this background, however, are two distinct, curvilinear magnetic features that stand out clearly from the surrounding granitoid signature.

These magnetic features are interpreted as either deformed metasedimentary or metavolcanic marker units of the Windermere Supergroup, or alternatively as sulphide-rich zones dominated by pyrrhotite developed along fault-controlled structures. The preferred interpretation is that these features represent folded metasedimentary or metavolcanic units, given their geometry and continuity, although both interpretations are considered prospective for tungsten mineralisation.

Structural interpretation indicates that these magnetic features are cross-cut and offset by northwest-striking, left-lateral shear zones. These structures are interpreted to be part of a Paleogene transpressional fault system and are considered important controls on fluid flow and mineralisation. Notably, the new magnetic data do not support the presence of a previously inferred north–south fault zone shown on earlier geological maps, suggesting that mineralisation at Silver Cliffs is more likely controlled by northwest-trending structures.

Radiometric data indicate potassium-rich granitic rocks and thorium-rich transported valley fill, with some attenuation of the radiometric signal on ridgelines due to snow cover at the time of survey. Despite these limitations, the combined magnetic and radiometric datasets provide a robust framework for understanding lithological and structural controls on mineralisation.

Importantly, recent surface sampling at Silver Cliffs has been confined to granitic rocks hosting stibnite-bearing quartz and carbonate veins. The newly identified magnetic features, which remain entirely unsampled, represent additional high-priority exploration targets with potential to host tungsten and associated mineralisation. The geophysical interpretation therefore materially expands the exploration opportunity at Silver Cliffs beyond the currently recognised mineralised zones.

### Silver Cliffs Prospect – Geological and Potential Mineralisation Context

The geophysical interpretation at Silver Cliffs can be viewed in the context of the Springfield Prospect, where high-grade scheelite mineralisation has been shown to be genetically linked to pyrrhotite-dominant sulphides that generate a strong magnetic response. At Silver Cliffs, the identification of folded metasedimentary or metavolcanic units, together with structurally controlled magnetic features, indicates that the prospect shares key geological characteristics with Springfield, including favourable host stratigraphy and structurally enhanced fluid pathways. While surface mineralisation at Silver Cliffs is currently expressed as precious-metal and antimony-bearing vein systems, the geophysical data suggest that the broader structural and lithological framework is permissive for skarn-style mineralisation analogous to Springfield, particularly in areas that remain unsampled.



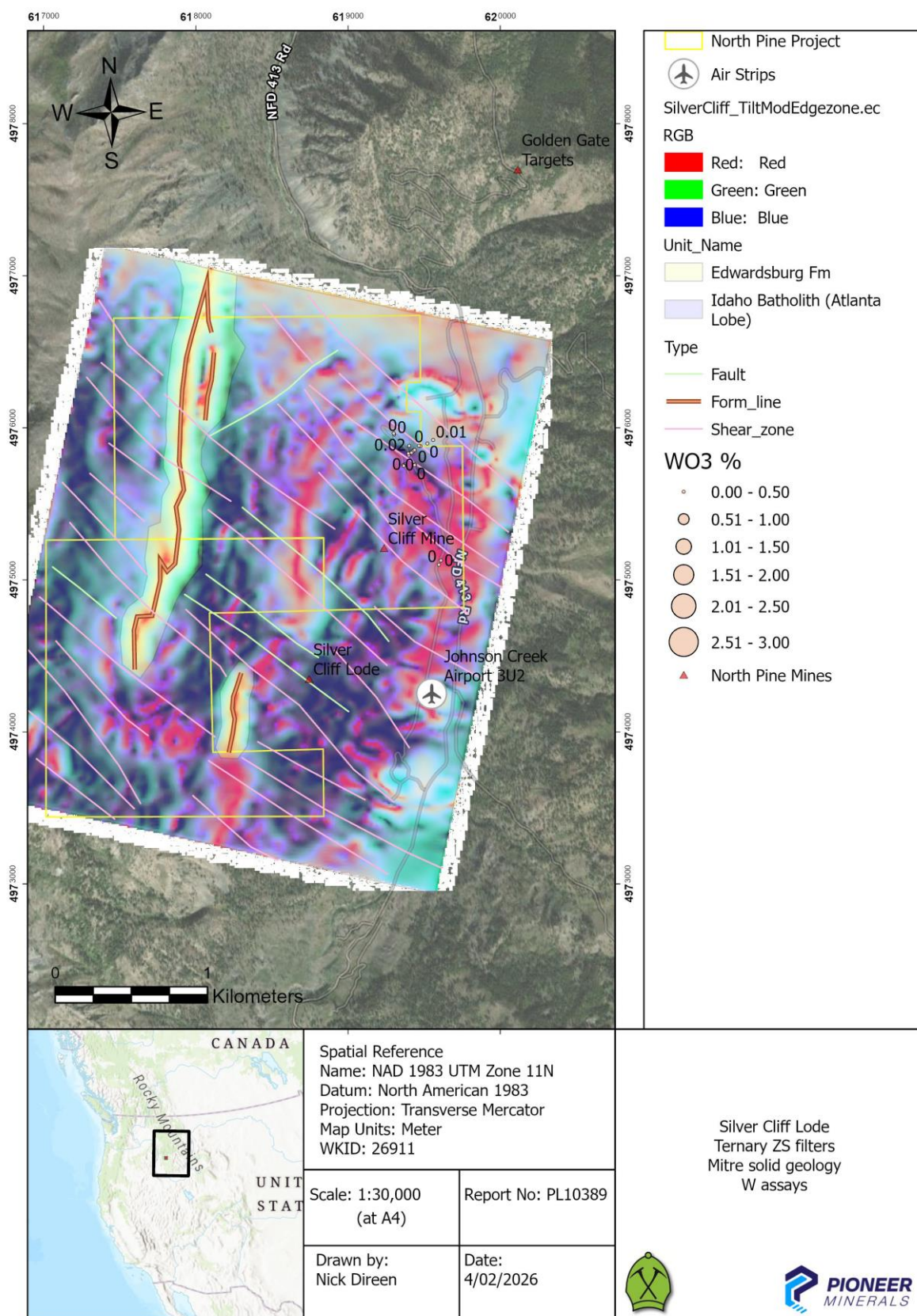


Figure 7: Ternary image of ZS tilt, Modulus and Edge Zone filters, with Mitre solid geology interpretation. Map shows a significant unexplored magnetic anomaly in the west of the claim group interpreted to be either a metasedimentary roof pendant or sulphide rich zone dominated by pyrrhotite.



### Northman Prospect – Geophysical Interpretation

The Northman Prospect is in the northern portion of the North Pine Project and is characterised by limited outcrop and minimal historical exploration. The new airborne magnetic and radiometric survey provides the first detailed insight into the subsurface geological architecture of this area.

Magnetic data clearly differentiate two major domains. The southwestern portion of the survey area is characterised by a smooth, weakly magnetic response interpreted to represent granodioritic rocks of the Idaho Batholith. In contrast, the northern and northeastern portions of the area display a complex, curvilinear pattern of alternating magnetic highs and lows forming a broad domain.

The more magnetic domain is interpreted as faulted and folded Neoproterozoic metasedimentary and metavolcanic rocks of the Windermere Supergroup, including calc-silicate and carbonate-bearing units considered favourable hosts for skarn-style mineralisation. The geometry of this belt suggests a structurally disrupted sequence that has been affected by folding and faulting, increasing its prospectivity for fluid-focused mineralisation.

The contact between the granitic rocks and the metasedimentary sequence is interpreted to be a low-angle intrusive contact with a scalloped geometry. Such contacts are widely recognised as favourable settings for both endoskarn mineralisation within granitic rocks and exoskarn mineralisation within adjacent carbonate-rich metasedimentary units.

Radiometric data support this interpretation, with potassium-rich responses corresponding to granitic rocks and mixed uranium–thorium responses associated with the metasedimentary sequence. This strong geophysical contrast reinforces confidence in the interpreted geological framework and helps delineate prospective contact zones beneath cover.

Historical and recent sampling at Northman has been extremely limited and confined to a small roof pendant within the broader interpreted metasedimentary sequence. As a result, the most prospective intrusive contact zones remain largely untested. The geophysical interpretation indicates that Northman has strong potential to host sulphide-rich skarn-style mineralisation analogous to that identified at Springfield, particularly along granite–metasediment contacts and within structurally complex portions of the Windermere Supergroup.

### Northman Prospect – Geological and Potential Mineralisation Context

The Northman Prospect occupies a comparable geological position to Springfield within the North Pine Project, characterised by the contact between granitic rocks of the Idaho Batholith and folded metasedimentary sequences of the Windermere Supergroup. At Springfield, this contact is interpreted to have focused skarn development and sulphide-rich mineralisation associated with scheelite deposition. The geophysical interpretation at Northman identifies a similarly extensive metasedimentary belt and intrusive contact geometry, suggesting that the same mineralising processes may have operated at a broader project scale. Although surface sampling at Northman has been minimal, the scale and continuity of the interpreted host sequence indicate that the prospect has the potential to host skarn-style tungsten mineralisation analogous to that defined at Springfield, particularly along structurally disrupted intrusive contacts

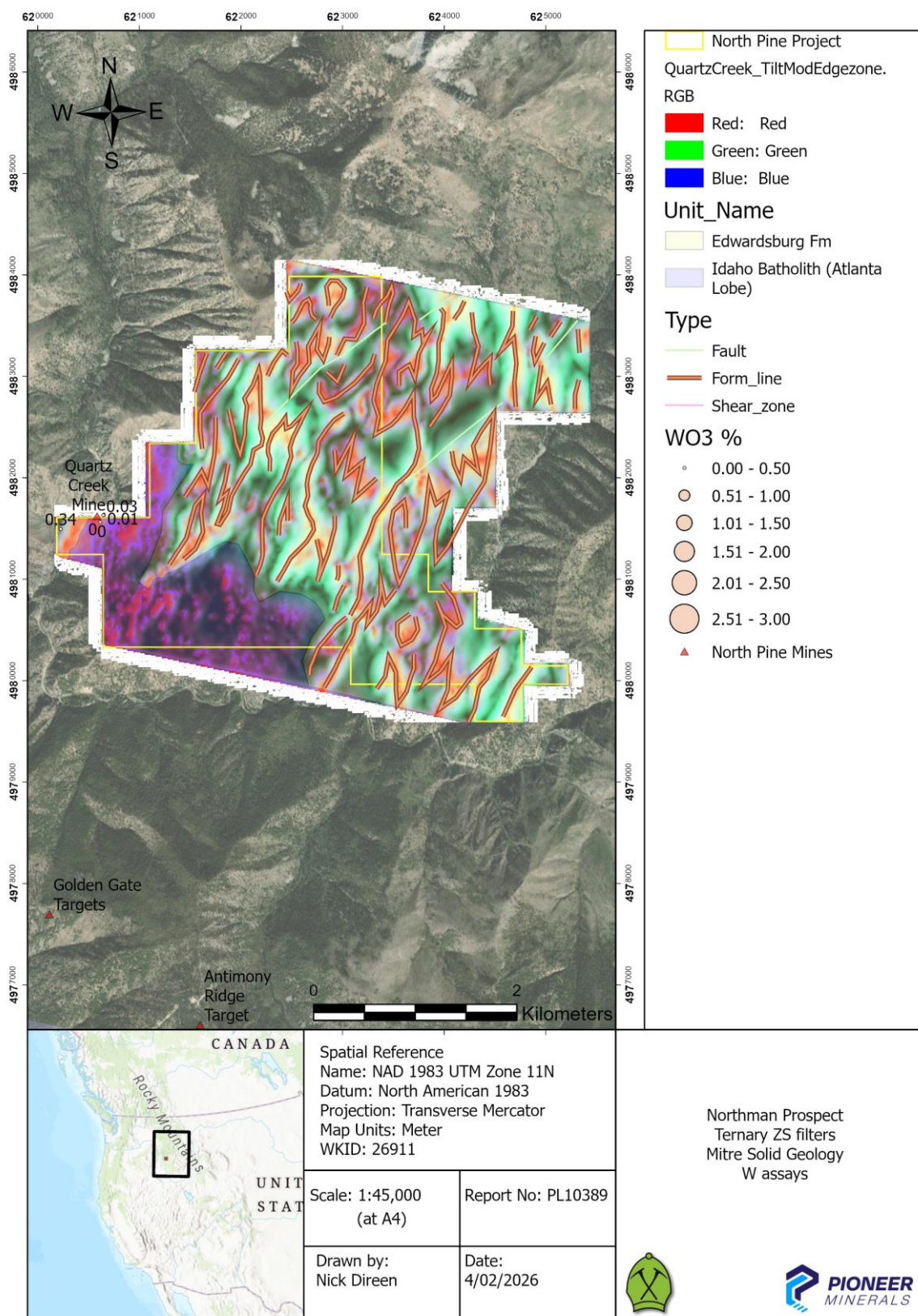


Figure 8: Ternary image of ZS tilt, Modulus and Edge Zone filters, with Mitre solid geology interpretation. The contact zone between the magnetic units of the Windermere supergroup and the low intensity granite are the target zones for mineral exploration.



### Commenting on the Geophysical and Geological Interpretation, CEO Michael Beven said:

*"The identification of a regional-scale magnetic feature interpreted to represent either a previously unrecognised roof pendant or extensive pyrrhotite-rich mineralisation provides the strongest evidence to date that what was historically interpreted as a small, isolated tungsten skarn hosted within a discrete roof pendant may in fact represent only a minor component of a much larger, previously unrecognised mineral system.*

*The clear spatial and genetic link between scheelite mineralisation, pyrrhotite-dominant sulphides and the magnetic anomaly fundamentally change's our understanding of the Springfield system. Rather than targeting isolated surface occurrences, we now have a coherent, district-scale framework to guide exploration"*

### Planned Follow Up Work

Pioneer plans to undertake an extensive, integrated field-based exploration program across the Springfield, Silver Cliffs and Northman Prospects to ground truth the geological and structural interpretations derived from the recently completed airborne magnetic and radiometric survey and subsequent geophysical interpretation.

At Springfield and Silver Cliffs, follow-up work will focus on the discrete, interpreted roof pendants and associated magnetic features identified in the geophysical data. Field activities will include detailed geological mapping to confirm lithological boundaries, skarn alteration styles and sulphide mineral assemblages, together with systematic rock chip and soil sampling to test for tungsten and associated mineralisation. Particular emphasis will be placed on identifying structural features such as faults, shears and breccia zones that may have controlled fluid flow and the localisation of mineralisation.

At the Northman Prospect, fieldwork will focus on the interpreted contact zone between granitic rocks of the Idaho Batholith and metasedimentary units of the Windermere Supergroup. This contact is considered highly prospective for skarn-style mineralisation based on the geophysical interpretation and its geological similarity to Springfield. Detailed mapping and targeted sampling will be undertaken along this contact to assess alteration, sulphide development and structural complexity, with the aim of identifying zones favourable for mineralisation.

Across all three prospects, the field program is designed to validate and refine the geophysical interpretation through direct geological observation, prior to the selection of priority drill targets. The integration of ground mapping, geochemistry and geophysics will form the basis for defining coherent, drill-ready targets and advancing the North Pine Project toward its next phase of exploration

### Staking and Claim Status

Pioneer has physically staked the 223 lode claims at the North Pine Project in Idaho. Under the BLM system, mineral claims are awarded on a first-come, first-served basis however, there is no guarantee that all claims will be granted to Pioneer. The Company advises investors that the tenure status of the North Pine Project is subject to final confirmation by the BLM. Pioneer will update the market in due course once claim grants have been officially confirmed.

For further information on Pioneer: [www.pioneerminerals.com.au](http://www.pioneerminerals.com.au).

This announcement has been approved for release by the Board of Directors.

**ENDS**

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### Competent Persons Statement

*The information in this announcement that relates to geophysical data acquisition and geological interpretation has been reviewed by Dr Nick Direen, Principal Geoscientist of Mitre Geophysics Pty Ltd. Dr Direen is a geophysicist with more than 30 years' experience in mineral exploration geophysics, geological interpretation and targeting across a range of deposit styles, including skarn, intrusive-related and structurally controlled mineral systems. Dr Direen has reviewed and interpreted the airborne magnetic and radiometric datasets acquired over the North Pine Project and has provided an independent geological interpretation integrating geophysical responses with regional geology and publicly available exploration data.*

*The information in this announcement that relates to exploration results, geological interpretation, and the integration of geophysical, petrographic and geochemical datasets has been compiled and reviewed by Michael Beven, Chief Executive Officer of Pioneer Minerals Limited and a Member of the Australian Institute of Geoscientists (AIG). Mr Beven has sufficient experience relevant to the style of mineralisation, type of deposit under consideration and the exploration activities 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 (JORC Code).*

*Mr Beven consents to the inclusion of the information in this announcement in the form and context in which it appears. Dr Direen has reviewed the geophysical interpretation and consents to the inclusion of the geophysical information and interpretations attributable to his work in the form and context in which they appear.*

### Forward-looking statements

*This announcement contains forward-looking statements. Generally, the words "expect", "potential", "intend", "estimate", "will" and similar expressions identify forward-looking statements. By their very nature forward-looking statements are subject to known and unknown risks and uncertainties that may cause our actual results, performance or achievements, to differ materially from those expressed or implied in any of our forward-looking statements, which are not guarantees of future performance. Statements in this announcement regarding Pioneer's business or proposed business, which are not historical facts, are forward-looking statements that involve risks and uncertainties, such as Mineral Resource estimates, market prices of commodities (including gold), capital and operating costs, changes in project parameters as plans continue to be evaluated, continued availability of capital and financing and general economic, market or business conditions, and statements that describe Pioneer's future plans, object.*

### Proximate Statements

*This announcement contains references to mineral exploration results derived by other parties either nearby or proximate to the North Pine Project and includes references to topographical or geological similarities to that of the North Pine Project. It is important to note that such discoveries or geological similarities do not in any way guarantee that the Company will have similar exploration successes on the North Pine Projects, if at all.*

### Compliance Statement

*This report contains information on the North Pine projects extracted from Pioneer Minerals market announcements on the, 01/12/2025 and 20/01/2026 released by the Company and reporting in accordance with the 2012 edition of the "Australian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves" (JORC Code). The original market announcements are available to view on [www.pioneerminerals.com.au](http://www.pioneerminerals.com.au) and [www.asx.com.au](http://www.asx.com.au). Pioneer Minerals is not aware of any new information or data that materially affects the information included in the original market announcement which continue to apply.*



## Appendix A:

### Idaho Claims Application

Claim Name	Serial Number	BLM Claim ID	Customer Name	BLM Product Name	BLM Admin State
SP001 – SP042	Not yet available	Not yet available	Lia Energy Corporation	Lode Claim	ID
AP041 – AP176	Not yet available	Not yet available	Lia Energy Corporation	Lode Claim	ID
AP185 – AP234	Not yet available	Not yet available	Lia Energy Corporation	Lode Claim	ID
SC001 – SC048	Not yet available	Not yet available	Lia Energy Corporation	Lode Claim	ID

## Appendix B: JORC Code, 2012 Table 1

### Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections)

Criteria	JORC Code explanation	Commentary
<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.</li> <li>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>Airborne magnetic and radiometric data were acquired using a helicopter-borne geophysical survey conducted by Precision GeoSurveys across the Springfield, Silver Cliffs and Northman Prospects at the North Pine Project, Idaho, USA.</li> <li>The survey utilised a nose-mounted cesium vapor magnetometer and an internally mounted gamma-ray spectrometer.</li> <li>Magnetic data were collected at nominal 50 m line spacing with a nominal terrain clearance of approximately 50 m. Tie-lines were flown at 500 m spacing.</li> <li>Radiometric data were collected concurrently with the magnetic data using industry-standard acquisition parameters.</li> <li>No drilling or downhole geophysical sampling is reported in this announcement.</li> <li>Geological interpretation was completed by Mitre Geophysics Pty Ltd using processed airborne geophysical datasets integrated with existing geological mapping, surface geochemistry and petrographic data previously released to the market.</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 results are being reported in this release.</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>N/A. No drilling results are being reported in this release.</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>No drilling results are reported in this release.</li> <li>Geological interpretation is based on geophysical datasets supported by existing geological mapping, petrographic descriptions and surface rock chip sampling previously reported.</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</li> </ul>	<ul style="list-style-type: none"> <li>No physical sampling is reported in relation to the airborne geophysical survey or interpretation.</li> <li>Previously reported rock chip sampling and petrographic studies were conducted using industry-standard methods and are not repeated in this announcement.</li> </ul>



Criteria	JORC Code explanation	Commentary
	<p><i>whether sampled wet or dry.</i></p> <ul style="list-style-type: none"> <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>	
<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 (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie lack of bias) and precision have been established.</li> </ul>	<ul style="list-style-type: none"> <li>No new assay data are reported in this announcement.</li> <li>Reference is made to previously released rock chip and petrographic results which were prepared and analysed using certified laboratories and industry-standard analytical techniques, as disclosed in earlier ASX announcements</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>Airborne geophysical data acquisition and processing were completed by Precision GeoSurveys, an independent specialist geophysical contractor.</li> <li>Data processing included compensation, diurnal correction, micro-levelling and radiometric background corrections.</li> <li>Geological and geophysical interpretation was completed independently by Mitre Geophysics Pty Ltd.</li> <li>Interpretation outcomes were reviewed by Pioneer Minerals Limited and its Competent Person.</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>Airborne survey navigation was controlled using differential GPS systems with positional accuracy appropriate for high-resolution geophysical surveys.</li> <li>The survey area covers approximately 34 km<sup>2</sup> across the Springfield, Silver Cliffs and Northman Prospects.</li> <li>The coordinate reference system used is UTM NAD83 Zone 11N.</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>Magnetic and radiometric data were collected at 50 m line spacing, which is considered sufficient to resolve geological structures, lithological contacts and potential skarn-related magnetic responses at the scale of investigation.</li> <li>Tie-lines at 500 m spacing provide quality control and support data levelling and interpretation</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</li> </ul>	<ul style="list-style-type: none"> <li>Flight lines were oriented to best resolve known and interpreted geological trends across the project area.</li> <li>The orientation of the data is considered appropriate to detect structural features, lithological boundaries and magnetic responses associated with roof pendants, intrusive contacts and sulphide-rich zones</li> </ul>

Criteria	JORC Code explanation	Commentary
	<i>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>	
<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>Not applicable. No physical samples are reported in this announcement.</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>The airborne geophysical survey was conducted and processed by Precision GeoSurveys in accordance with industry's best practice.</li> <li>Geological interpretation was completed by Mitre Geophysics Pty Ltd and reviewed internally by Pioneer Minerals Limited.</li> <li>No external audit has been undertaken.</li> </ul>

## Section 2 Reporting of Exploration Results

(Criteria in this section apply to all succeeding sections)

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>The North Pine Project Located in Idaho consists of 223 staked claims, approx. 18.37 Km<sup>2</sup>. The tenure status of the North Pine Project is subject to final confirmation by the BLM. Pioneer will update the market in due course once claim grants have been officially confirmed.</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>At Northman and Silver Cliffs prospect within the North Pine Project no systematic historical exploration is recorded on the project areas.</li> <li>At Springfield Prospect, Only 1,900 ft of diamond drilling was reported to have taken place to define the tungsten mineralisation which was already exposed in the rockface. Production commenced 1953–1955 under U.S. Government tungsten subsidy and Ore was processed in a 75-tpd gravity mill with concentrates trucked to Stibnite for final electric separation</li> <li>Historical records indicate that 39,000 tons of ore were mined averaging 0.35 to 0.40% WO<sub>3</sub> for 1,522 short ton units of high grade &gt;70% WO<sub>3</sub> concentrate sold. An additional 2,159 lower grade concentrate and 8 tons of &gt;9% material was sent to the Salt Lake Tungsten Co. (Mitchell, 2008, p.8;</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 Yellow Pine district is underlain by Cretaceous granitic rocks of the Idaho Batholith intruding metasedimentary rocks of the Windermere Supergroup. Mineralisation occurs as structurally and lithologically controlled hydrothermal replacement and skarn-related systems, associated with late-stage magmatic fluids derived from the Idaho Batholith. Primary mineralisation comprises stibnite (Sb<sub>2</sub>S<sub>3</sub>) and scheelite (CaWO<sub>4</sub>) with accessory sulfides, hosted in brecciated shear zones and carbonate horizons adjacent to major fault structures. Alteration assemblages include illite-sericite-quartz and calc-silicate skarns, with later oxidation producing jarosite and ferruginous halos. The mineralisation is interpreted as a multi-phase magmatic-hydrothermal Sb-W system analogous to the nearby Perpetua (Stibnite) and Horse Heaven deposits.</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 No drilling results are reported in this release.</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</li> </ul>	<ul style="list-style-type: none"> <li>No data aggregation, grade capping, metal equivalent calculations or weighted averages are reported in this announcement.</li> <li>Reported geophysical interpretations are qualitative in nature and based on spatial relationships, geological context and supporting geochemical and petrographic data previously disclosed.</li> </ul>



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	<p>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.</p> <ul style="list-style-type: none"> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</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 (eg 'down hole length, true width not known').</li> </ul>	<ul style="list-style-type: none"> <li>N/A No drilling results are reported in this release.</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>Relevant maps, sections and geophysical images are included in the announcement illustrate the location, scale and geological context of the reported exploration results.</li> <li>Diagrams include airborne magnetic images, interpreted geological features, sample locations and petrographic images that fairly represent the exploration results.</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>The announcement presents a balanced and objective summary of exploration results.</li> <li>Both the strengths and limitations of the data are disclosed, including the early-stage nature of exploration and the interpretive basis of the geophysical results.</li> <li>No Mineral Resources or Ore Reserves are reported.</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>Petrographic analysis confirms the presence of scheelite and pyrrhotite associated with skarn alteration at Springfield.</li> <li>Rock chip sampling has returned high-grade tungsten results and confirms the presence of a robust reduced skarn system at Springfield.</li> <li>Airborne magnetic data identify regional-scale magnetic features interpreted to represent roof pendants, sulphide-rich zones or favorable intrusive contacts across Springfield, Silver Cliffs and Northman.</li> <li>These datasets have been integrated to refine the geological model and guide future exploration targeting.</li> </ul>
<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>	<ul style="list-style-type: none"> <li>Planned exploration includes detailed geological mapping, systematic surface sampling and structural analysis to ground truth geophysical interpretations across Springfield, Silver Cliffs and Northman.</li> <li>At Springfield and Silver Cliffs, follow-up work will focus on discrete interpreted roof pendants and associated magnetic features.</li> <li>At Northman, follow-up work will focus on the interpreted contact zone between the Idaho Batholith and the Windermere Supergroup.</li> <li>The objective of this work is to refine exploration targets and prioritise areas for potential drilling.</li> <li>Approx 60 kg of sampling material taken from the tailings at the historic Springfield Mine have been sent to Mineral Technologies for the purposes of recovery test work on both gold and tungsten.</li> <li>6 samples with reported high-grade tungsten were selected for petrographic description work. This work is currently underway.</li> </ul>