



**QEM**

ASX : QEM

# Exploring for Critical Minerals

Corporate Presentation September 2026

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## Cautionary Note

Historical grades reported in this presentation (and the cross-referenced ASX announcements) for the Big It and Garden Valley Projects refer to historical exploration results and do not represent estimates of Mineral Resources or Ore Reserves and none of the disclosed figures should be relied upon as such. This summary compiles historical information from government publications and secondary project material. Historical production, dimensions, mineral occurrences and descriptions for the Big It and Garden Valley Projects have not been independently verified in this presentation.

## Historical Information Disclosure

The historical information reported in this announcement relating to the Big It and Garden Valley Projects is derived principally from historical data compiled from U.S. Government and Idaho State geological reports, historical mine and prospect records and project files. QEM has reviewed supporting records including historical geological mapping, underground workings plans and descriptions of historical exploration, mineral occurrences, and reported historical results.

The historical information has not been independently verified by QEM where historical sampling or assay results are reported, or where complete details of sample location, sample dimensions, representativity, sampling and preparation methodology, analytical techniques, laboratory procedures and QAQC have generally not been identified in the historical records reviewed. Accordingly, the reliability and repeatability of individual historical results cannot be established to modern reporting standards.

Historical descriptions of mineralisation, mineral occurrences, workings and reported assay results should therefore be regarded as indicative of the geological and exploration potential of the Project only and should not be interpreted as demonstrating the grade, continuity or economic significance of mineralisation, or as representing a current Mineral Resource or Ore Reserve. Further work, including field verification, geological and structural mapping, systematic sampling and drilling, is required to confirm the nature, extent, continuity and grade of mineralisation.

## Listing Rule 5.23 and 5.43 disclosure

In accordance with ASX Listing Rule 5.23 and 5.43, in relation to statements in this presentation concerning mineral resource estimates and exploration results, the Company refers investors to the following ASX announcements:

- 26 Aug 2026 Significant Expansion Opportunities Big It Tungsten Project
- 10 Sep 2026 Significant Opportunities Garden Valley Rare Metals Project
- 05 Mar 2024 QEM Upgrades Julia Creek Resource Base - Updated

In relation to the above announcements, the Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and, in the case of estimates of mineral resources, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed. The company confirms that the form and context in which the Competent Persons' findings are presented have not been materially modified from the original market announcement.

# Experienced Team



Led by a team of successful and invested professionals, with proven record of exploration, project evaluation and development



## Tim Wall

Chair

- Senior Executive of multiple ASX 100 companies
- Director and Principle of TJW Energy, Senior Advisor ANZ – Oil and Gas at DSS+
- Former MD BP Refinery (Bulwer)
- Former President Global Manufacturing at Incitec Pivot Ltd (ASX:IPL)



## Robert Cooper

CEO and Managing Director

- Strategic and commercially focused mining executive with over 30 years of experience globally
- Mining engineer with broad technical and operational experience across a wide range of commodities
- Former BHP executive, ex-Director of Novonix (ASX: NVX) and former MD/CEO of New Century Resources (ASX: NCZ)



## Daniel Harris

Non - Executive Director

- Over 40 years of global vanadium experience
- Former Director of US Vanadium LLC (USA), Currently, Australian Vanadium Ltd (ASX: AVL), Flinders Mines (ASX:FMS)
- Former CEO positions with Atlantic (ASX: ATI): Atlas Iron (ASX: AGO); ex VP EVRAZ plc. - Vanadium Assets; ex MD Vametco Alloys



## Rod Watt

Business Development Manager

- More than 30 years of geological and exploration experience across major and junior mining companies
- Management of exploration programmes and leading project development from greenfield/ discovery through to resource development and feasibility studies
- Senior management roles with WMC Resources and Anglo American

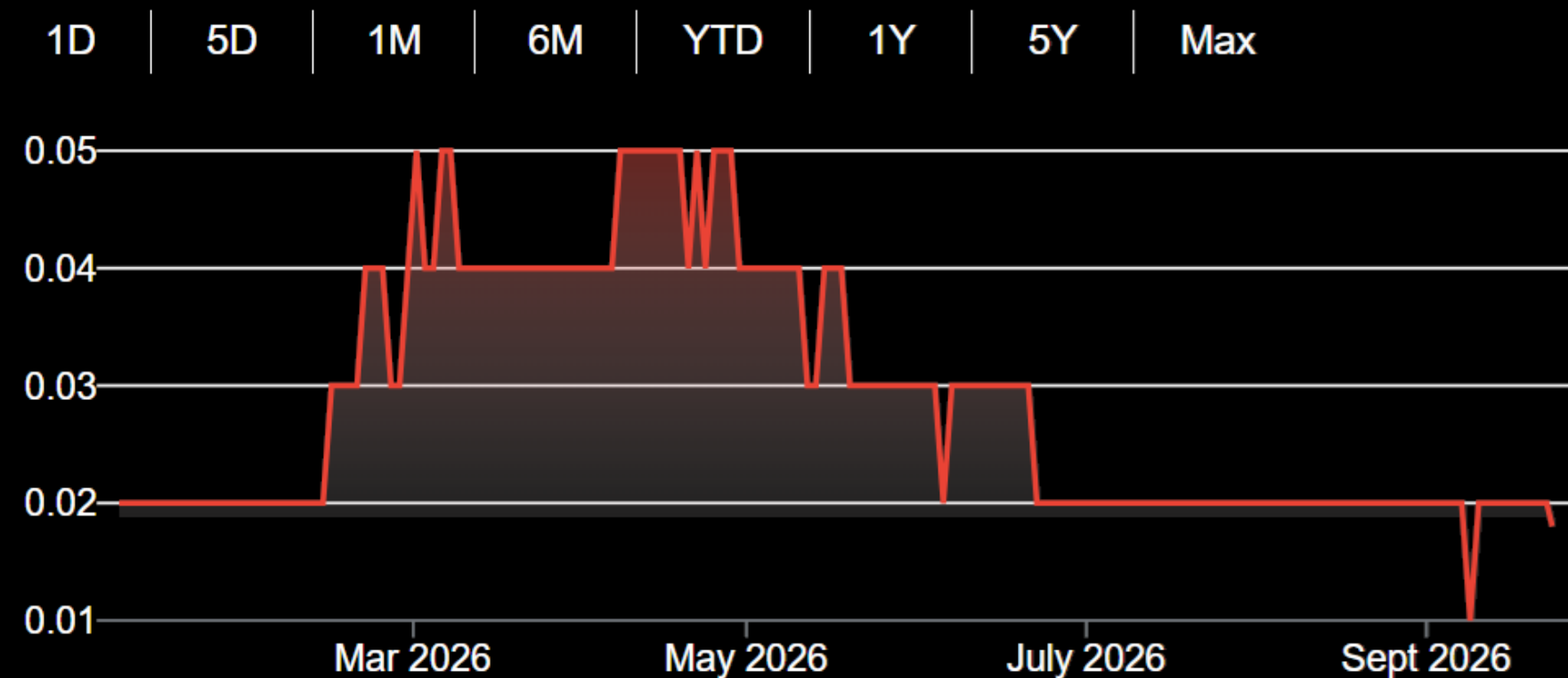
# Corporate Snapshot

QEM Limited

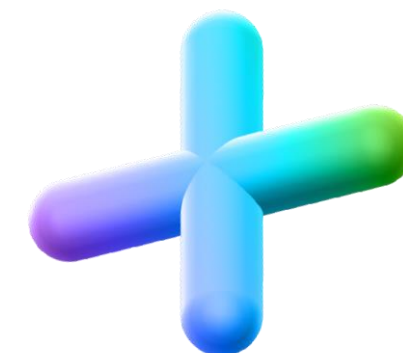
|                 |                         |                     |
|-----------------|-------------------------|---------------------|
| Shares on Issue | Share Price 22 Sep 2026 | Cash at 30 Jun 2026 |
| 362.4m          | \$0.017                 | \$4.26m             |

0.017 AUD    ↓ 15.00%    -0.00 year to date    ASX: QEM

22 September 2026



|      |       |           |       |               |       |
|------|-------|-----------|-------|---------------|-------|
| Open | 0.017 | Mkt cap   | 6.16M | vk high       | 0.057 |
| High | 0.017 | P/E ratio | -     | 52-wk low     | 0.013 |
| Low  | 0.016 | Div yield | -     | Qtrly div amt | -     |



**\$6.16m**  
Market Cap (22 Sep 2026)



**Director Support**  
Management alignment with public shareholders

**50.0%**

**Top 20**  
Shareholders



# Critical Minerals Projects – Idaho, USA

QEM owns 100% of the Big It (tungsten, antimony and gold) and Garden Valley (niobium, tantalum, rare earth elements) Projects

## Big It Project

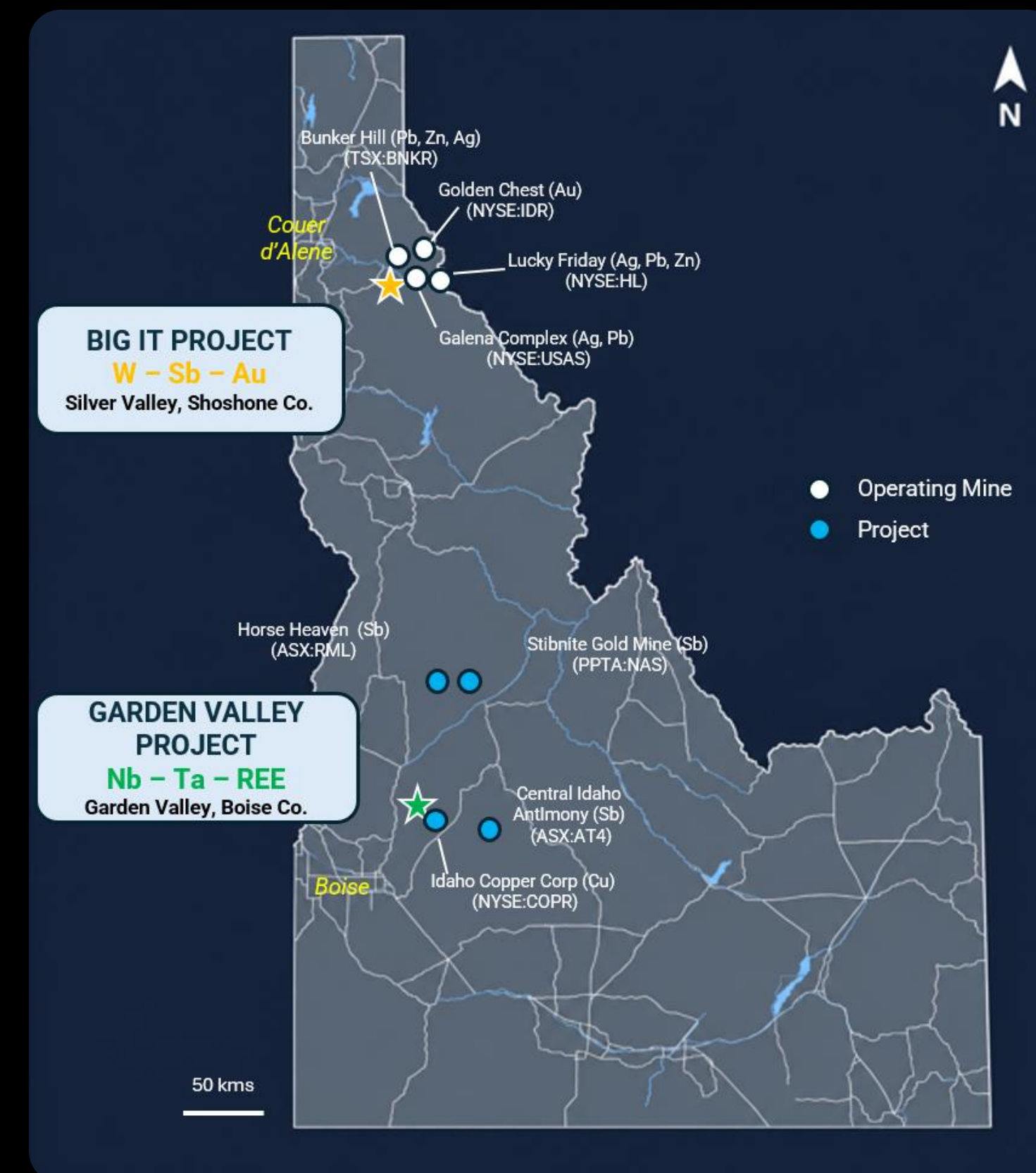
**Confirmed past-producing U.S. tungsten project with demonstrated tungsten-antimony-gold mineralisation**

- High-grade tungsten concentrates produced grading 67–75% WO<sub>3</sub>
- Historical underground sampling returning individual values of up to 2,980 ppm W, 19.5% Sb, and 11.15 g/t Au<sup>1</sup>.
- U.S. government pro-actively working to rebuild its tungsten supply chain, highlighted by the recently announced US\$12 billion policy initiative to stockpile critical minerals to reduce off-shore supply dependency

## Garden Valley Project

**Multiple historically documented niobium (columbite), tantalum-bearing rare-metal and rare earth elements (REE) mineral occurrences**

- Historical 309 lb columbite-bearing crystal and 100 lb samarskite crystal
- Demonstrated capacity of the pegmatite system to develop very coarse concentrations of Nb- and REE-bearing minerals
- Garden Valley Project is prospective for multiple U.S. critical minerals including: niobium, tantalum and REE – providing potential to address significant U.S. supply chain vulnerability



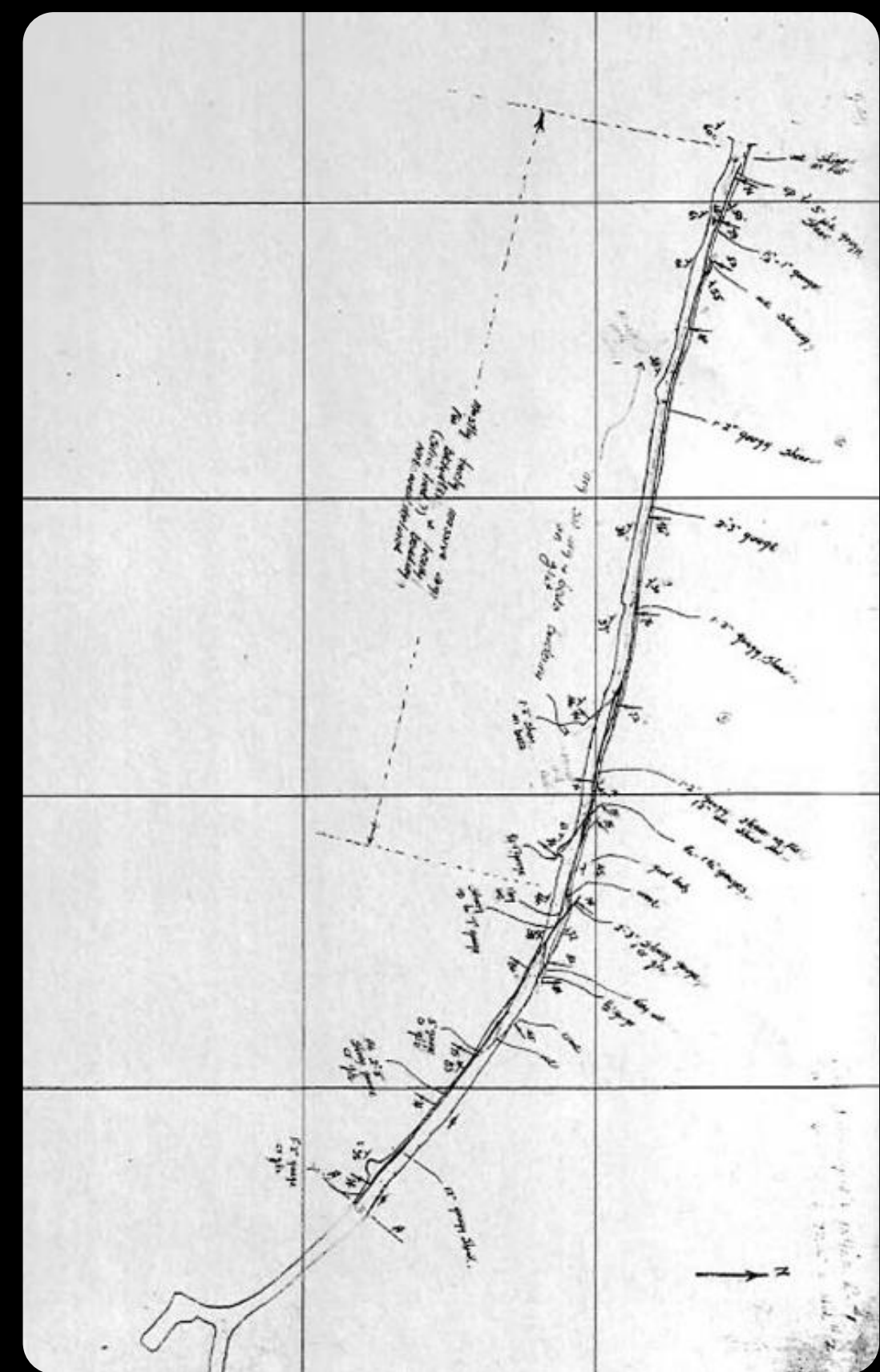
<sup>1</sup> Results are from a limited suite of historical rock/grab samples without surveyed locations or representative sample widths. Quoted maximum W, Sb and Au values occur in separate samples and should not be interpreted as representative grades or evidence of continuous mineralisation.

<sup>2</sup> Fryklund, V.C. Jr. (1951). A Reconnaissance of Some Idaho Feldspar Deposits, With a Note on the Occurrence of Columbite and Samarskite. Idaho Bureau of Mines and Geology Pamphlet 91



# Big It Tungsten Project

Demonstrated W-Sb-Au polymetallic system with compelling untested depth and strike potential



- **Extensive historical underground development providing early access and reduced costs**  
Provides direct access to the mineralised system and a platform for exploration, with U.S. Government records documenting approximately 380 m of lateral development, together with raises, winzes and historical stoping
- **Compelling untested depth and strike potential**  
Steeply dipping mineralised vein system has not been systematically drill tested beneath the historical underground workings; potential extensions along strike and within parallel structures also remain unexplored
- **Historical U.S. Government exploration confirmed multiple high-grade tungsten oreshoots**  
1952–53 U.S. DMEA programme identified additional oreshoots and historical records report average grades of 4.45% WO<sub>3</sub> over average vein width of 6.8" (17.2 cm) and 7.45% WO<sub>3</sub> over 4.3" (10.9 cm).
- **Demonstrated W-Sb-Au polymetallic system**  
Underground rock/grab sampling in 2016 returned individual maximum values of 19.50% Sb and 11.15 g/t Au, demonstrating an important antimony and gold component in addition to tungsten mineralisation<sup>3</sup>.
- **Highly prospective Pritchard Formation and structural setting**  
Hosted within the regionally extensive Pritchard Formation immediately southwest of the prolific Coeur d'Alene mining district, providing a broader geological and structural framework for exploration.
- **Clear, cost-effective pathway to test and expand the historical mineralised system**  
Existing underground development provides direct access for geological mapping and systematic sampling of the known vein system, complemented by surface geochemistry, structural mapping and targeted drilling.

<sup>3</sup> Results are from a limited suite of historical rock/grab samples without surveyed locations or representative sample widths. Quoted maximum W, Sb and Au values occur in separate samples and should not be interpreted as representative grades or evidence of continuous mineralisation

# Tungsten

A metal in high demand



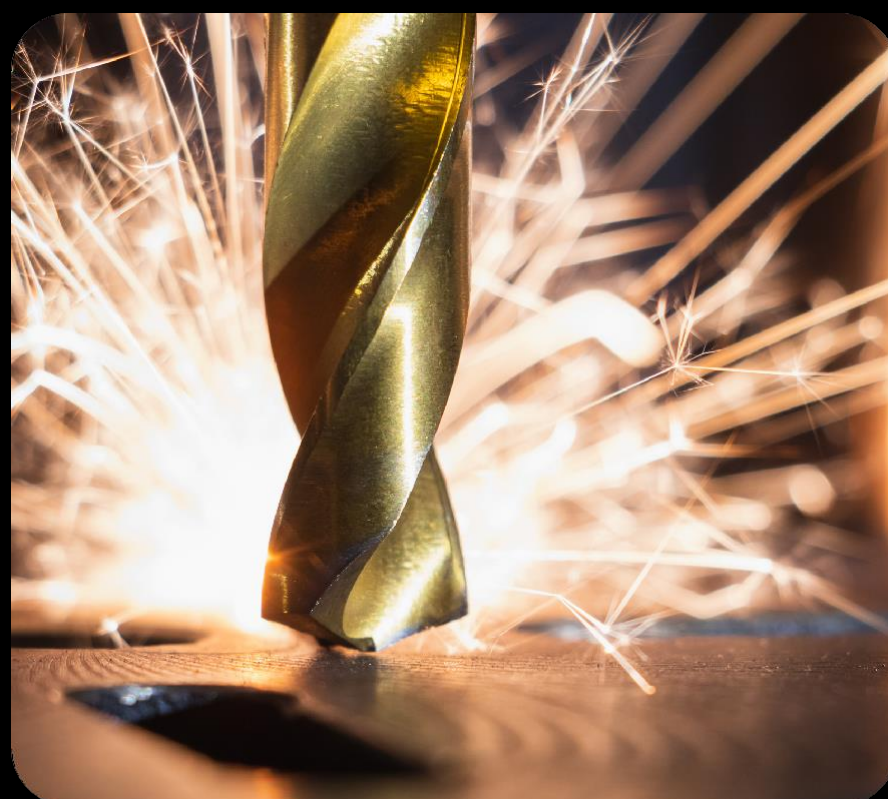
## Improves Wear Resistance

Most widely used alloy to for cutting tools and mining equipment, and high temperature industrial parts.



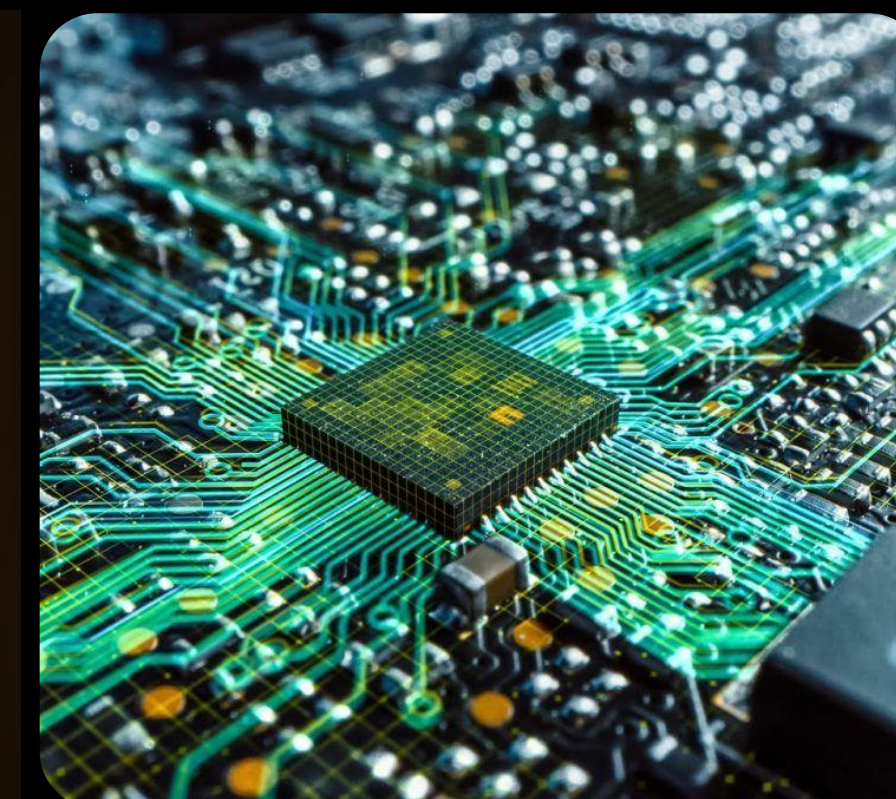
## Defence Industry Applications

Critical for the supply of armour piercing munitions and other defence applications.



## Other/newer applications

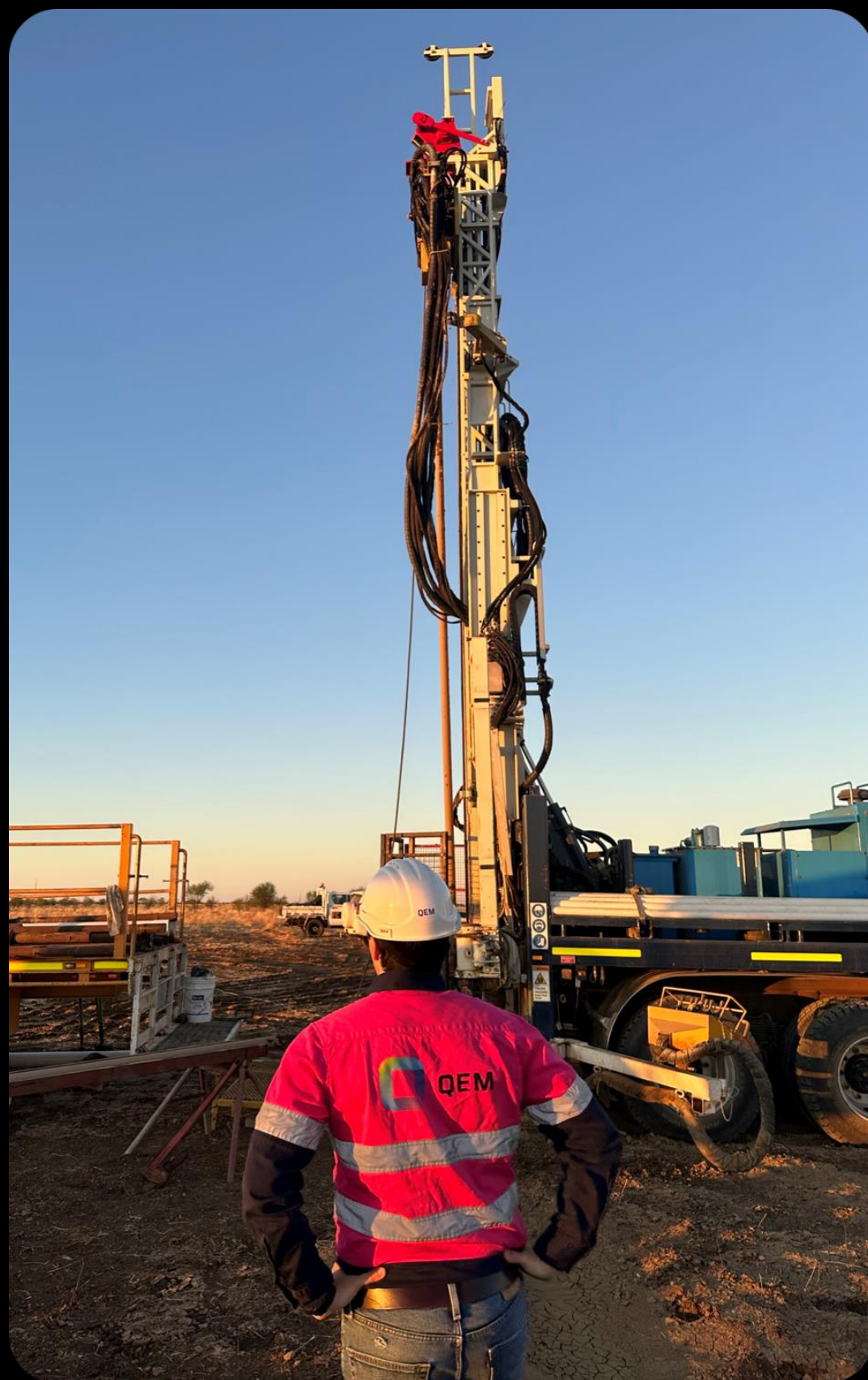
Finding increased use in light bulb filaments, electronics, welding electrodes, and as weights in sporting goods and aerospace.



# Garden Valley Rare-Metals Project



Covers a cluster of historically recognised rare-element pegmatite prospects with historical production



- **Garden Valley Project represents a highly prospective U.S. rare-metal pegmatite project**  
Significant U.S. mine production of niobium and tantalum has not been reported since 1959, with the United States reported as 100% net-import reliant on both metals<sup>4</sup>.
- **Historical Columbite Mine represents the priority target**  
Historical USGS work documented a large, strongly zoned pegmatite approx. 250 ft long and at least 200 ft wide, tested by a approx. 150 ft underground tunnel beneath a prominent quartz core.
- **Exceptional coarse rare-metal mineralisation historically reported**  
Includes recovery of a 309 lb columbite-bearing crystal associated with 100 lb samarskite crystal, demonstrating the capacity of the pegmatite system to develop very coarse concentrations of Nb- and REE-bearing minerals<sup>5</sup>.
- **Multiple additional mineralised pegmatites provide district-scale exploration upside**  
Reporting of historical columbite, samarskite and/or euxenite at the Bowman and Mirandeborde prospects, together with rare-earth oxides at Mica Dome.
- **Historical exploration was limited and largely confined to surface/underground prospecting**  
Principal occurrences documented during mid-20th-century investigations; no systematic modern exploration programmes undertaken to define scale, continuity or geochemical characteristics of the pegmatite field.
- **Clear pathway to rapidly advance the Project**  
Programmes to commence with geological and structural mapping, systematic rock and soil geochemistry and modern geophysics, followed by potential drilling of priority targets (Vaught-Peck, Bowman and Mirandeborde).<sup>8</sup>

<sup>4</sup> U.S. Geological Survey (2022), Mineral Commodity Summaries 2022, U.S. Geological Survey, 202 p., DOI: 10.3133/mcs2022; U.S. Geological Survey, Niobium and Tantalum Statistics and Information

<sup>5</sup> Fryklund, V.C. Jr. (1951). A Reconnaissance of Some Idaho Feldspar Deposits, With a Note on the Occurrence of Columbite and Samarskite. Idaho Bureau of Mines and Geology Pamphlet 91

# Niobium

Growing demand and supply concentration risk



## Used in high strength steel

Construction and automotive industries anchoring market expansion with HSLA now mandatory in modern military vehicles, naval vessels, and aerospace.



## Niobium-based superalloys

Used in jet engine turbine blades (F-35, F-22) and next-generation hypersonic platforms.



## Energy storage

Niobium is emerging as a solid-state battery anode material with NioCorp and others racing to secure supply.



# Julia Creek Project

QEM Limited owns 100% of the Julia Creek Vanadium and Energy Project, a world class critical minerals and oil shale resource



- **Critical Mineral exposure in high growth market with key advantage of multi-commodity exposure**  
Producing high-purity vanadium ( $V_2O_5$ ) and transport fuel (synthetic diesel) from the same orebody
- **Tiet 1 mining jurisdiction within Queensland's Northwest Minerals Province**  
Project location intersected by major infrastructure corridor, and close to all services including CopperString
- **One of the world's largest single vanadium resources**  
JORC 2012 Mineral Resource Estimate of 2,870 Mt at 0.31%  $V_2O_5$ , comprising of Indicated 461Mt at 0.29%  $V_2O_5$  and Inferred 2,406 Mt at 0.31%  $V_2O_5$
- **Significant petroleum resource within one of the world's largest co-located vanadium-oil shales**  
SPE-PRMS Petroleum Resource - Petroleum In Place (PIIP) at 90% recovery: 3C category 654 MMbbls; 2C category 94 MMbbls; and 1C category 6.3 MMBBLs
- **Streamlined approvals processes for the Project**  
Declared a Coordinated Project by Qld State Government and a Controlled Action by Commonwealth Department of Climate Change, Energy, the Environment and Water (DCCEW)
- **Terms of Reference released for the Environmental Impact Statement**  
Baseline environmental monitoring along with other long-term activities ongoing

# Vanadium

The Versatile Element



## Improves Tensile Steel Strength

Most widely used alloy to strengthen steel (HSLA.) in construction, automotive, aerospace, rail, shipping, tools, drilling and more.



## Energy storage

Vanadium Flow Batteries (VFB) are the preferred solution for large scale energy storage globally. Produces 78% less CO<sub>2</sub> than Li-B - Cradle-to-gate, with recycling and renewables.



## Chemical and Catalysts

Catalyst in sulphuric acid production, 'Smart Glass', ceramics, dyes, cathodes for lithium batteries.



## Supports Fuel Efficiency

High strength-to-weight ratio makes vanadium a critical component in the automotive industries. In 85% of all vehicles by 2025. Henry Ford first used in Model – T.



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# Appendix A:

Julia Creek Resource

# Julia Creek Resource Overview 2024



## JORC (2012) Vanadium & Other Metals

| Resource Class  | Strat Unit | Mass (Mt) | Average Thickness (m) | Insitu Density (gm/cc) | V <sub>2</sub> O <sub>5</sub> (Wt%) | Cu (ppm) | Mo (ppm) | Ni (ppm) | Zn (ppm) | Al (ppm) |
|-----------------|------------|-----------|-----------------------|------------------------|-------------------------------------|----------|----------|----------|----------|----------|
| Indicated       | CQLA       | 167       | 3.17                  | 2.40                   | 0.24                                |          |          |          |          |          |
|                 | CQLB       | 128       | 2.58                  | 2.28                   | 0.30                                |          |          |          |          |          |
|                 | OSU        | 81        | 1.92                  | 1.95                   | 0.31                                |          |          |          |          |          |
|                 | OSL        | 84        | 2.02                  | 1.93                   | 0.32                                |          |          |          |          |          |
| Total Indicated |            | 461       |                       | 2.20                   | 0.28                                |          |          |          |          |          |
| Inferred        | CQLA       | 697       | 2.46                  | 2.42                   | 0.23                                | 293      | 137      | 120      | 801      | 2,943    |
|                 | CQLB       | 826       | 3.13                  | 2.23                   | 0.39                                | 448      | 226      | 199      | 1,165    | 5,555    |
|                 | OSU        | 432       | 1.84                  | 1.97                   | 0.31                                | 380      | 152      | 188      | 1,090    | 57,843   |
|                 | OSL        | 451       | 1.95                  | 1.95                   | 0.29                                | 346      | 133      | 170      | 1,040    | 58,502   |
| Total Inferred  |            | 2,406     |                       | 2.18                   | 0.31                                |          |          |          |          |          |
| Total           |            | 2,870     |                       | 2.19                   | 0.31                                |          |          |          |          |          |

Table 1: Summary of JORC Mineral Resource Estimate 9 February 2024

Note:

The estimate uses a minimum cut-off of 0.2% V2O5 for the oil shale units, and minimum cut-off of 0.15% V2O5 for the Coquina units.

- 1. The total resource tonnage reported is rounded to reflect the relative uncertainty in the estimate categories and component horizons may not sum correctly.

# Julia Creek Resource Overview 2024



SPE-PRMS Petroleum Resource - Petroleum In Place (PIIP) @ 90% recovery

| Resource Class | Strat Unit | Mass (Mt) | Average Thickness (m) | Total Moisture (Wt%) | Oil Yield (L/tonne) | Oil Yield LTOM | MMBbls (in-situ PIIP) | MMBbls Recoverable |
|----------------|------------|-----------|-----------------------|----------------------|---------------------|----------------|-----------------------|--------------------|
| 3C Contingent  | CQLB       | 903       | 2.5                   | 6.8                  | 53.1                | 55.0           | 254                   | 228                |
|                | OSU        | 621       | 1.8                   | 6.8                  | 75.9                | 79.0           | 248                   | 223                |
|                | OSL        | 609       | 1.9                   | 6.8                  | 70.7                | 76.7           | 224                   | 202                |
| 3C Total / Ave |            | 2134      |                       | 6.8                  | 66.6                | 70.2           | 726                   | 654                |
| 2C Contingent  | CQLB       | 107       | 2.1                   | 2.8                  | 50.9                | 52.3           | 33                    | 29                 |
|                | OSU        | 76        | 1.9                   | 13.3                 | 78.7                | 81.4           | 36                    | 32                 |
|                | OSL        | 81        | 2.0                   | 11.8                 | 74.8                | 76.7           | 36                    | 33                 |
| 2C Total / Ave |            | 264       |                       | 9.3                  | 68.1                | 70.1           | 105                   | 94                 |
| 1C Contingent  | CQLB       | 7         | 1.9                   | 2.8                  | 49.0                | 49.6           | 1.9                   | 1.8                |
|                | OSU        | 5         | 1.9                   | 13.3                 | 77.2                | 78.7           | 2.5                   | 2.2                |
|                | OSL        | 6         | 2.1                   | 11.8                 | 74.6                | 76.2           | 2.6                   | 2.3                |
| 1C Total / Ave |            | 18        |                       | 9.3                  | 66.9                | 68.1           | 7.0                   | 6.3                |
| Total / Ave    |            |           |                       |                      |                     |                |                       | 726                |

Table 2: Summary of SPE-PRMS Oil Resource estimate 9 February 2024

- 1. The total resource tonnage reported is rounded to reflect the relative uncertainty in the estimate and component horizons may not sum correctly.
- 2. The 3C petroleum resource reported includes the 1C and 2C volumes, ie. They are cumulative not incremental as per the PRMS 2018 guidelines
- 3. An economic cut-off of 40L/tonne was applied prior to the calculation; it must be noted that the CQU and CQLA did not meet the >40l/tonne for inclusion in the calculation. The 1C, 2C and 3C volumes reported here are unrisksed.