



21 October, 2024

## Six VHMS Copper-Gold Targets Defined at Juggernaut

### Juggernaut Demonstrates VHMS Copper-Gold Camp Potential

#### Key Points

- The interpreted Juggernaut Volcanic Hosted Massive Sulphide (VHMS) copper-gold mineralised system is located 70kms south-east of the DeGrussa and Monty Copper-Gold Deposits.
- Further interpretation has identified six individual drill targets at Juggernaut, with the Company interpreting Juggernaut as having VHMS copper-gold camp potential.
- VHMS mineralisation systems often form in clusters of deposits, and the Company interprets the six targets defined at Juggernaut represent this mineralisation style characteristic.
- The six targets, Archer, Falconer, Seymour, Smith, Howard, and Palmer are defined by each target's individual stratigraphic, structural, and geochemical attributes.
- The Juggernaut VHMS copper-gold target was defined by numerous field work programmes, that included geological mapping, surface sampling, and considerable modelling and interpretation.
- The interpreted VHMS mineralisation system at Juggernaut is defined by a zoned lead-zinc to copper geochemical anomaly, with geological mapping defining sedimentary and volcanic rocks, indicative of a deep seafloor environment with syngenetic volcanism. Structural modelling determined the rock units at Juggernaut were formed within a rift structural regime.
- The high prospectivity of the six copper-gold targets at Juggernaut is evidenced by the confluence of multiple geological attributes, including geochemical anomalism, mapped geological units and associated textures, and modelled structural regime.
- The attributes of these six targets are interpreted by the Company to have high potential for a VHMS discovery to be made, similar to DeGrussa in the adjacent Bryah Basin.
- Great Western is advancing preparations for drilling of these six exciting copper-gold targets, with a heritage clearance scheduled for next month.



Great Western Exploration (ASX: GTE) is pleased to announce six individual targets have been identified by the Company at the Juggernaut Volcanic Massive Sulphide (VHMS) mineralised system.

The Juggernaut Copper-Gold Targets are within the Company's Yerrida North Project, located on the western portion of the Yerrida Basin, and located approximately 800km north-east of Perth and 70kms south-east of the DeGrussa and Monty Cu-Au VHMS deposits, shown in Figure 1.

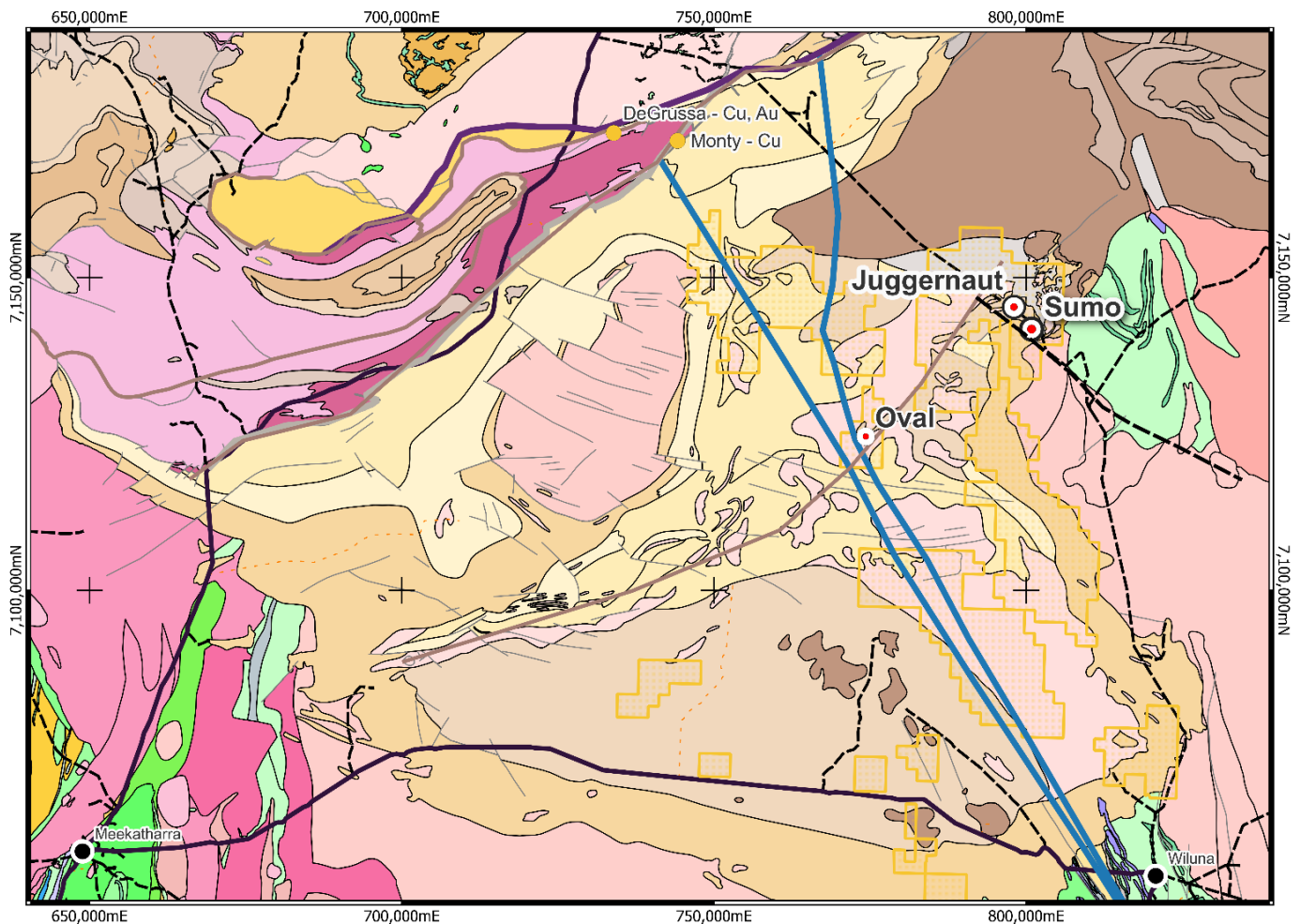


Figure 1: Location of the Juggernaut VHMS Target in relation to Great Western Tenements within the Yerrida Basin, the Company's Oval Copper-gold and Sumo Niobium Targets, and the DeGrussa and Monty copper-gold VHMS deposits.

Juggernaut was identified by Great Western extensive field programmes and data compilation (GTE ASX Announcement 8 October 2024), and defined by:

- Broad zoned lead-zinc and copper lag soil anomalism;
- Rock-chip sampling recorded significant silver, lead, zinc, and copper results.
- Fault and geological modelling suggest the sedimentary and volcanic rocks units formed within a rift structural regime;



- Geological mapping completed (Figure 2) defined sedimentary units (siltstones, sandstones, chert/exhalates) with syngenetic volcanic activity (pillow and pepperite textured basalts), that are interpreted to be a deep-seafloor environment;
- The mapped rock units are part of the Killara Formation, determined by previous studies to be the equivalent of the DeGrussa Formation (age and rock types), host to the DeGrussa and Monty copper-gold VHMS Deposits in the adjacent Byrah Basin (Hawke et al, 2015).
- VHMS mineralisation are often formed in clusters, and Juggernaut's six separate targets are interpreted by the Company to represent this mineralisation style characteristic.

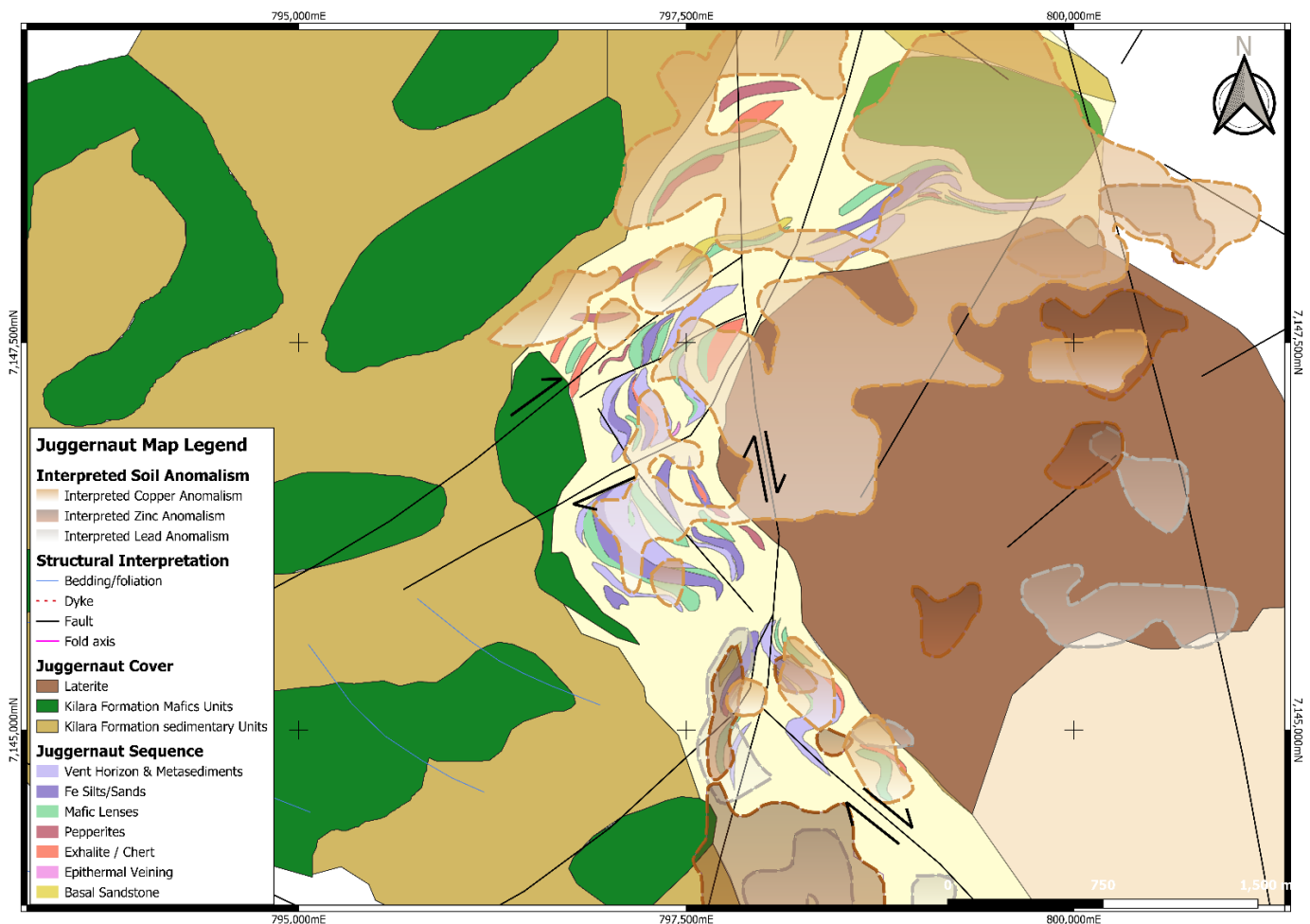


Figure 2: Geological Map of the Juggernaut VHMS Target, overlaid with interpreted levelled copper, zinc, and lead anomalism. The central volcanic and sedimentary rocks are interpreted to be highly prospective for VHMS mineralisation.

The Company interprets that the zoned lag soil lead-zinc and copper anomalism together with the mapped geological association between sedimentary and volcanic rocks suggest a deep seafloor geological environment and represents a highly prospective VHMS mineralisation system at Juggernaut. Great Western believes the mapped geological units at surface represent a position outboard from a volcanic vent, with potential at depth to define copper mineralisation below a black smoker position of a VHMS system, as shown in Figure 3.





Further interpretation and modelling of the geological, geochemical, and structural data by Great Western has found Juggernaut represents a potential VHMS copper-gold “camp”, with six separate drill targets defined. VHMS style mineralisation is often formed in clusters of deposits and the Company believes these six individual targets represent this mineralisation characteristic. These targets are interpreted by the Company to be outboard from the sulphide zone of a VHMS mineralisation system, as shown in Figure 3.

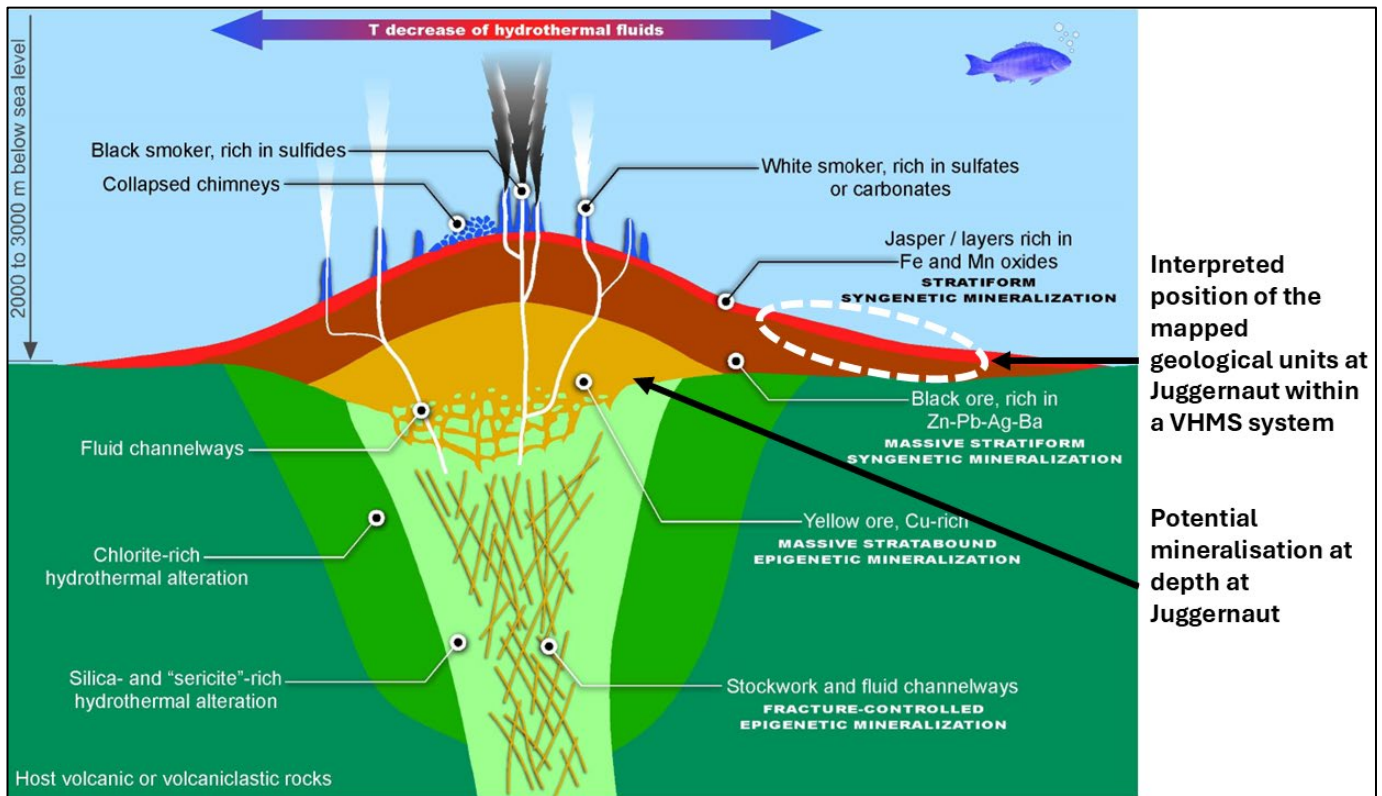


Figure 3: Schematic diagram of a volcanic hosted massive sulphide system (VHMS), and the interpreted mapped position of Juggernaut at surface (after Colin-Garcia et al, 2016). The Juggernaut Target is highly prospective, with potential preserved VHMS copper mineralisation below surface.

The six targets, Seymour, Falconer, Howard, Palmer, Smith and Archer, are interpreted by each individual target's stratigraphic, structural, and geochemical attributes. Both Seymour and Howard are interpreted to be in a folded vent horizon, within the copper lag soil anomaly, and contain significant rock-chip results (GTE ASX Announcement 8 October 2024).

The Palmer, Smith, and Archer Targets are also within the interpreted vent horizon rocks, and within a zone of lead-zinc lag soil anomalism with a significant interpreted north-south trending major regional structure separating the targets (GTE ASX Announcement 8 October 2024).

The Falconer target is within the copper lag-soil anomaly, located along the interpreted north-south regional feature detailed above where a bend in this feature, which is interpreted to be a dilation zone for vent formation and sulphide accumulation (GTE ASX Announcement 8 October 2024).

The location of the six targets is shown in Figure 4.



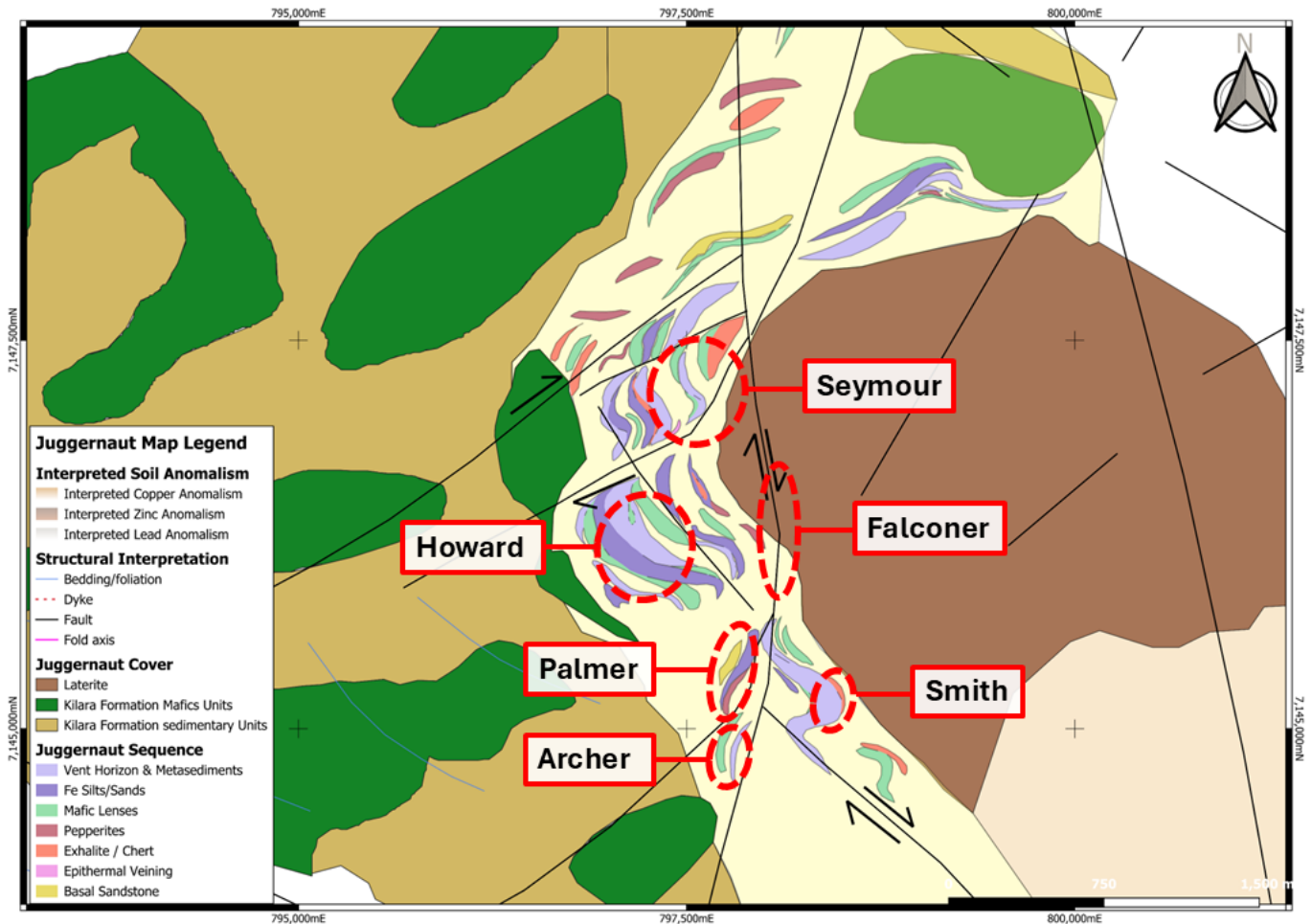


Figure 4: Six VHMS targets have been identified at the Juggernaut Copper-Gold Camp, interpreted to be outboard from the sulphide zone of a VHMS mineralisation system.

Great Western is advancing preparations for drilling these exciting copper-gold targets, with a heritage clearance scheduled for December 2024.

## Oval and Oval South Copper-Gold Target

Drilling has commenced at the giant Oval intrusive related copper-gold Target. It is anticipated that the first drill-hole will be completed in late-November, and the second in December. Assay results are anticipated 6-8 weeks after each drill-hole is completed. A down-hole electromagnetic survey will be completed, with drilling planned for Oval South after further interpretation utilising the additional drilling and geophysical data.

**Authorised for release by the Board of Directors of Great Western Exploration Limited.**



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**Competent Person Statement**

*The information in this report that relates to Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Mr. Shane Pike who is a member of the Australian Institute of Mining and Metallurgy. Mr. Pike is an employee of Great Western Exploration Limited and has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking 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'. Mr. Pike consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.*

*The information in this report that relates to the Company's Exploration Results is a compilation of Results previously released to ASX by Great Western Exploration (17/08/2023, 4/10/2023, and 8/10/2024). Mr. Shane Pike consents to the inclusion of these Results in this report. Mr. Pike has advised that this consent remains in place for subsequent releases by the Company of the same information in the same form and context, until the consent is withdrawn or replaced by a subsequent report and accompanying consent. 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 that all material assumptions and technical parameters in the market announcements continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.*

**References**

Colin-García M, Heredia-Barbero M, Cordero G, Camprubí A, Ortega-Gutiérrez F, Negron A, Bernal S. 2016, Hydrothermal vents and prebiotic chemistry: A review. Boletín de la Sociedad Geológica Mexicana. 68. 599-620.

Hawke, Margaret & Meffre, Sebastien & Stein, Holly & Hilliard, Paul & Large, Ross & Gemmell, Bruce. 2015. Geochronology of the DeGrussa Volcanic-Hosted Massive Sulfide Deposit and Associated Mineralisation of the Yerrida, Bryah and Padbury Basins, Western Australia. Precambrian Research. 267. 250-284. 10.1016/j.precamres.2015.06.011.



## About Great Western Exploration

Great Western Exploration (GTE.ASX) is a copper, gold and base metal explorer with a world class, large land position in prolific regions of Western Australia. Great Western's tenements have been under or virtually unexplored.

Numerous work programmes across multiple projects are underway and the Company is well-funded with a tight capital structure, providing leverage to exploration success.

