

GROUND GEOPHYSICAL SURVEYS UNDERWAY AT DESERT STAR PROJECTS, CALIFORNIA, USA

Highlights

- **Ground geophysical surveys in progress:** Bayan has commenced detailed ground magnetic, radiometric and gravity surveys across the Desert Star Projects in California, USA. Completion is expected within two weeks.
- **Refining four high-priority REE targets:** The surveys will enhance resolution of key anomalies (ST1, ST2, ST3, and NT1), refining geometry and structure to guide drill targeting.
- **Desert Star, Targets (ST1, ST2 and ST3):** Strong gravity anomalies, elevated Th/U ratios, radiometric highs and structural intersections consistent with REE-bearing carbonatite systems, akin to the nearby Mountain Pass deposit.
- **Desert Star North, Target (NT1):** Target zone exhibits moderate radiometric anomalies, gravity highs, and fault intersections, highlighting potential for structurally controlled REE mineralisation.
- **Data integration driving drill strategy:** Ground datasets will be integrated with recent surface geochemical sampling and the desktop geophysical study, delivering a robust technical foundation for prioritising drill-ready targets.
- **Next phase of exploration:** Survey outcomes will inform the next stage of systemic fieldwork, including follow-up sampling and preparation for scout drilling.
- **Strategic Location of Desert Star Projects:** The Desert Star Project is strategically located just 4.5 km northeast of MP Materials' Mountain Pass REE Mine¹ one of the largest and highest-grade rare earth operations globally. Desert Star North Project lies only 3 km north of the Colosseum Gold Mine, which hosts a JORC-2012 compliant Mineral Resource of 27.1 Mt @ 1.26 g/t Au for 1.1 million ounces². Both properties are located within the same regional corridor and share structural and geological characteristics with the globally significant Mountain Pass Rare Earth Mine.
- **Drill Permitting Progress:** The Company is having active engagement with US Bureau of Land Management (BLM) to progress drill permitting and regulatory approvals at Desert Star Projects.
- **Downstream Evaluation:** Initiation of downstream evaluation is underway to secure U.S. supply chain.

¹ MP Minerals Corp. (NYSE:MP) www.mppminerals.com

² Dateline Resources Ltd (ASX:DTR) ASX Announcement titled 'Colosseum Scoping Study Delivers Positive Outcomes' dated 23 October 2024.

Bayan Mining and Minerals Ltd (ASX: BMM; "Bayan", "BMM" or "the Company") is pleased to announce that detailed ground geophysical surveys are now underway at its 100% owned Desert Star Projects, located in California, USA.

The field program includes ground magnetic, radiometric and gravity surveys, all of which have now commenced. These surveys will significantly improve the resolution of anomalies previously identified through airborne geophysics and the recent desktop study, which defined four high-priority REE target areas (ST1, ST2, ST3 and NT1).

The ground-based datasets will be integrated with the results of the surface geochemical sampling program and the geophysical desktop study (*see ASX Announcements dated 1 September 2025 and 5 September 2025 respectively*). Together, these results will refine the geometry of the priority target zones, providing a robust technical basis for prioritising follow-up work and preparing for scout drilling.

The Company is having active engagement with the U.S. Bureau of Land Management (BLM) to progress drill permitting and regulatory approvals at Desert Star projects. Company will provide an update in coming days.



Figure 1: Ground Geophysical Survey Underway at Desert Star Projects



Figure 2: Ground Geophysical Survey Underway at Desert Star Projects

Priority Target Areas

The integrated geophysical desktop study based on regional radiometric, magnetic and gravity survey has defined four priority target areas within the Desert Star Project with three targets (ST1–ST3) located in the southern claim block and one target (NT1) located in the Desert Star North Project (*see ASX announcement dated 5 September 2025 and refer to Figure 3*). All targets are supported by coincident geophysical and geochemical anomalies and are located in structurally favourable positions along the regional corridor that also hosts the Mountain Pass Rare Earth Mine and the Colosseum Gold Mine. While further ground validation is required, the targets represent the highest-priority areas for follow-up exploration and provide a clear focus for the next phase of work.

Target ST1: Located in the southeastern portion of the Desert Star claim block, this target is defined by a gravity high coincident with a magnetic low and elevated Th/U radiometric ratio. The anomaly measures approximately 400 m by 300 m and is situated at the intersection of dominant NW–SE and NNW–SSE trending structures, with subordinate NE–SW trending faults. The combination of gravity, magnetic and radiometric criteria is consistent with a dense carbonatite or alkaline intrusive body and supports its classification as a priority REE target.

Target ST2: Located in the northwest of ST1 and is delineated by a discrete gravity high associated with coincident radiometric anomalies and mapped structural corridors. The target area measures approximately 350 m by 250 m and lies within a zone of



intersecting NW–SE structures. Elevated Th/U ratios further enhance the potential of this anomaly as an expression of REE-bearing intrusives or structurally controlled alteration.

Target ST3: Located in the southwestern portion of the Desert Star claim block and is characterised by a broad gravity high, reduced magnetic intensity and anomalous Th/K and Th/U radiometric ratios. The anomaly extends over an area of approximately 500 m by 300 m. Its spatial association with mapped faults and its geophysical expression are analogous to the signatures observed at the Mountain Pass carbonatite system, making it a compelling target for follow-up work.

Target NT1: Located along the western margin of the Desert Star North claim block. It is defined by moderate radiation anomalies, a gravity high and localised fault intersections. The target covers approximately 400 m by 250 m and lies within a transition zone from basement gneiss to Cambrian sedimentary units. The structural setting and geophysical characteristics suggest potential for REE mineralisation in a similar structural environment to the Colosseum breccia-pipe system to the south.

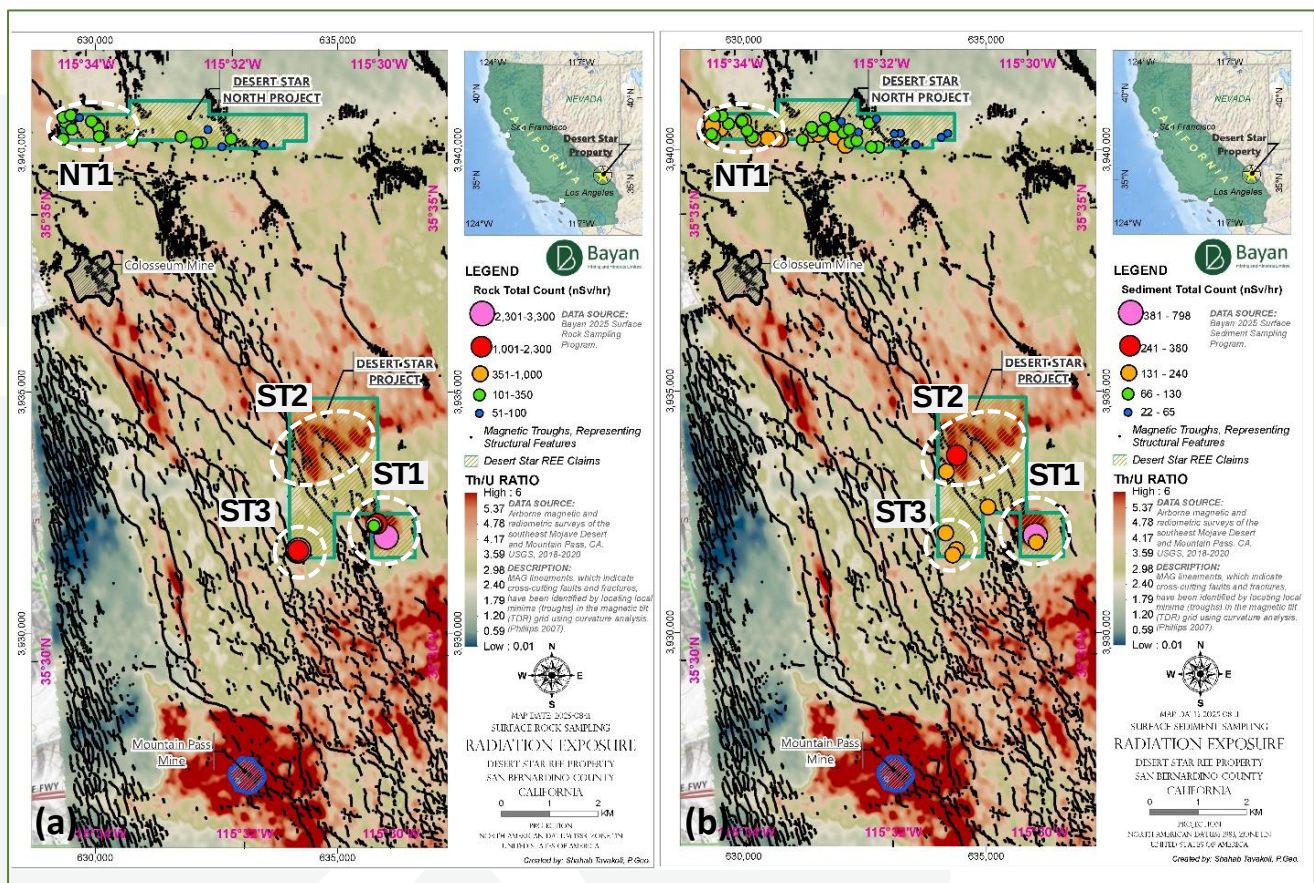


Figure 3: Priority Target Areas Overlain on Th/U Ratio Radiometric Data

Executive Director Fadi Diab commented:

"We are entering a critical and exciting phase of exploration at the Desert Star Projects. The recently completed geophysical desktop study delivered standout results, confirming four priority REE targets supported by a compelling alignment of gravity, magnetic, and radiometric anomalies further strengthened by surface geochemistry and structural interpretation.

With detailed ground geophysical surveys now underway, we are sharpening our focus on high-impact target definition to support scout drilling. Strategically located just kilometres from the Mountain Pass Rare Earth Mine, North America's only operating REE mine, Desert Star sits in a world-class mineral corridor with exceptional geological potential. We believe Desert Star has the potential to emerge as a cornerstone REE asset for Bayan in the U.S. market."

Next Steps

The current ground magnetic, radiometric and gravity surveys are expected to be completed within two weeks. Once received, the new data will be integrated with the previously reported surface geochemical results and the recent desktop study to refine the geometry of the four defined target zones. This work will enable prioritisation of areas for follow-up sampling and scout drilling.

About Desert Star Projects

The Desert Star Projects comprises two claim blocks, Desert Star and Desert Star North located in San Bernardino County in California's eastern Mojave Desert. Together, the projects cover a combined area of approximately 9.75 km² and consist of 117 federal lode claims³, which have been staked and claim applications were submitted to the U.S. Bureau of Land Management for registration.

Strategically located within a globally significant critical minerals corridor, the Desert Star Project lies just 4.5 km from MP Materials' operating Mountain Pass Rare Earth Mine and approximately 4.7 km from southern extents of the Colosseum Gold Mine.

The area is well supported by infrastructure, including nearby access to Interstate 15, high-voltage power transmission lines servicing the Mountain Pass Mine, and a Union Pacific rail line within 25 km that may support bulk logistics in future development. Additional renewable power infrastructure in the Ivanpah Valley provides further optionality for low-emission energy access.

The Desert Star claim block comprises 72 federal lode claims covering approximately 6 km². Geologically, the area lies within a structurally uplifted block of Paleoproterozoic metamorphic and igneous basement rocks intruded by Mesoproterozoic alkaline and carbonatite intrusives, including shonkinite, syenite, granite, and carbonatite. These intrusions are genetically linked to REE mineralisation in the district, with key alteration assemblages such as barite, fluorite, hematite, phlogopite, and calcite indicating a magmatic-hydrothermal origin. The tenement is bounded by the Ivanpah Fault to the

³ Refer to BMM ASX Announcements dated 7 July 2025 and 14 July 2025.

east and the Clark Mountain Fault to the west, both major regional structures associated with mineralisation at Mountain Pass and Colosseum.

The Desert Star North claim block consists of 45 federal lode claims covering approximately 3.75 km². The project spans a geological transition from Paleoproterozoic basement rocks in the west to Cambrian marine sedimentary units in the east, including limestones, quartzites, and shales. These formations are part of the broader stratigraphy that hosts both rare earth and gold mineralisation in the region. Desert Star North is similarly transected by the northwest-trending Ivanpah and Clark Mountain faults, which exhibit vertical displacement in excess of 10,000 feet. These structures are recognised as key controls on regional mineralisation, including at the Mountain Pass REE Mine and the Colosseum Gold Mine, located immediately to the south.

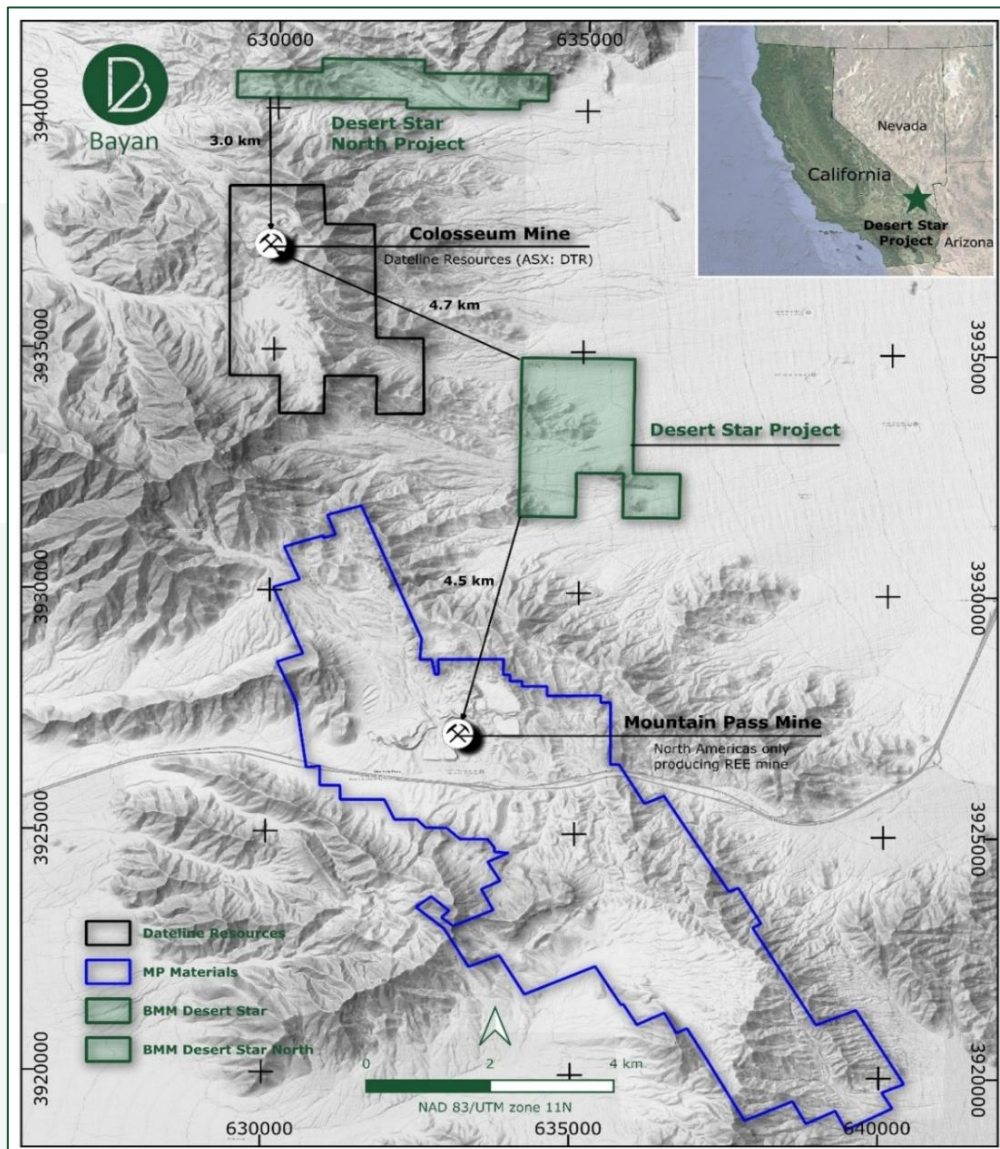


Figure 4: Desert Star Projects Location Map

For further information, please contact:

Fadi Diab

Executive Director

Tel: +61 8 6188 8181

E: Fadi.Diab@bayanminerals.com.au

Authorised for release by the Board of Bayan Mining and Minerals Limited

-ENDS-

Competent Persons Statement

The information in this release that relates to Exploration Targets or Exploration Results is based on information compiled by Mr Dejan Jovanovic, a Competent Person who is a Member of the European Federation of Geologists (EurGeol). The European Federation of Geologists is a Joint Ore Reserves Committee (JORC) Code 'Recognised Professional Organisation' (RPO). An RPO is an accredited organisation to which the Competent Person under JORC Code Reporting Standards must belong to report Exploration Results, Mineral Resources, or Ore Reserves through the ASX. Mr Jovanovic is the General Manager of Exploration and is a part-time contractor of the Company. Mr Jovanovic has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the JORC 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Jovanovic consents to the inclusion in the release of the matters based on his information in the form and context in which it appears.

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.

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 announcements.

Forward-looking Statements

Certain statements included in this release constitute forward-looking information. Statements regarding BMM's plans with respect to its mineral properties and programs are forward-looking statements. There can be no assurance that BMM's plans for development of its mineral properties will proceed as currently expected. There can also be no assurance that BMM will be able to confirm the presence of additional mineral resources, that any mineralisation will prove to be economic or that a mine will successfully be developed on any of BMM's mineral properties. The performance of BMM may be influenced by a number of factors which are outside the control of the Company and its Directors, staff, and contractors.

These statements include, but are not limited to statements regarding future production, resources or reserves and exploration results. All such statements are subject to certain risks and uncertainties, many of which are difficult to predict and generally beyond the control of the Company, that could cause actual results to differ materially from those expressed in, or implied or projected by, the forward-looking information and statements.

Except for statutory liability which cannot be excluded, each of BMM, its officers, employees and advisors expressly disclaim any responsibility for the accuracy or completeness of the material contained in these forward-looking statements and excludes all liability whatsoever (including in negligence) for any loss or damage which may be suffered by any person as a consequence of any information in forward-looking statements or any error or omission. BMM undertakes no obligation to update publicly or release any revisions to these forward-looking statements to reflect events or circumstances after today's date or to reflect the occurrence of unanticipated events other than required by the Corporations Act and ASX Listing Rules. Accordingly, you should not place undue reliance on any forward-looking statement.

Proximate Statements

This release contains references to mineral exploration results derived by other parties either nearby or proximate to the Desert Star Projects and includes references to topographical or geological similarities to that of the Desert Star Projects. 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 Desert Star Projects, if at all.