

EXTENSIVE AND SIGNIFICANT IP TARGET IDENTIFIED AT THE EDINBURGH PARK JV

Highlights

- In October 2023, G Ex Australia Pty Ltd, a wholly-owned subsidiary of Gold Fields Ltd (Gold Fields, GFI.NYSE), entered into a A\$15M option and joint venture (JV) agreement to earn a 75% interest in GSN's Edinburgh Park Project in Northern Queensland
- The JV has had early success with the identification of a large-scale (>2 km wide), shallow induced polarisation (IP) anomaly
- The anomaly is interpreted to be a porphyry system, which could be host to a large-scale intrusive related gold-copper and/or epithermal gold deposit
- The anomaly is partly overlain by a large area (4 km long by 1km wide) of mapped quartz-pyrite stockwork veining
- Surface soil and rock chip samples in the area contain elevated gold, silver, copper, molybdenum and other metals
 - Elevated metals and their spatial zonation support an underlying porphyry system
 - Rock chip samples of outcropping stockwork veining contain up to 10.5 g/t gold
- Finalisation of heritage agreements and further geophysical refinements are underway in preparation for drilling in 2025
- IP and helicopter-borne aeromagnetic (HeliMag) surveys are ongoing over other key target areas identified by both GSN and Gold Fields

GSN's Managing Director, Matthew Keane, commented:

"This is an exciting development for the Edinburgh Park Project. The scale of this IP anomaly, combined with coincident geochemical anomalism, favourable surface geology, and inferred structural trends, marks it as a prime target for a significant intrusion-related or epithermal gold-copper system.

Both GSN and Gold Fields are eager to drill test this target, which is likely to commence in 2025 once the northern Queensland wet season has subsided. In the meantime, ongoing geophysical surveys and on-ground mapping have the potential to generate further targets within previously identified and newly identified target areas".

GSN welcomes comments and queries relating to this announcement on our Investor Hub site, where Company management can answer your questions directly ([GSN Investor Hub link](https://www.gsml.com.au/investor-hub)).

Exciting IP anomaly identified at Edinburgh Park

A gradient array IP survey has delineated an extensive large-scale chargeability anomaly at a northern prospect within the Edinburgh Park Project (Figures 1 and 2). Preliminary processing of a pole-dipole gradient array section line across the gradient anomaly reveals an arcuate IP response, potentially indicating a sulphide halo around a preserved porphyry system (Figure 3). An alternative interpretation suggests the strong IP response to the east could directly correlate with an intrusion-related system, likened to the +3 Moz Mount Leyshon gold-silver mine, located ~120 km to the west.

Field mapping has confirmed the presence of sulphides (predominantly pyrite) in outcropping geology over the anomaly. The anomaly is partly overlain by a previously mapped zone of outcropping sheeted and stockwork veining, filled with quartz, pyrite $\pm$ specular hematite, covering an area approximately 4 km long by 1 km wide.



Figure 1. Location map showing major intrusive related gold systems (IRGS) and their gold endowment proximal to Edinburgh Park.

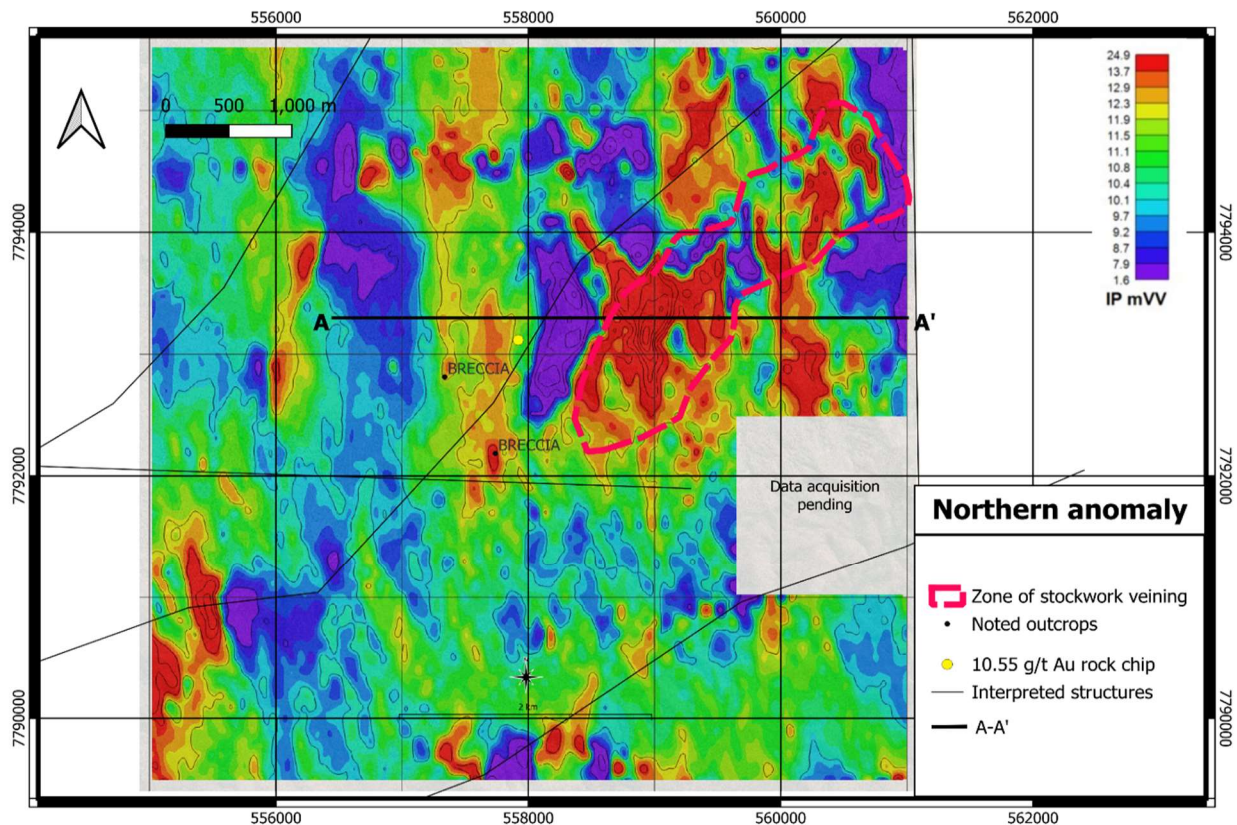


Figure 2. Gradient array induced polarisation (IP) data anomaly showing a large chargeability anomaly in the northeast of the image (red colouration). An east-west pole-dipole section line A-A' is shown below in Figure 2.

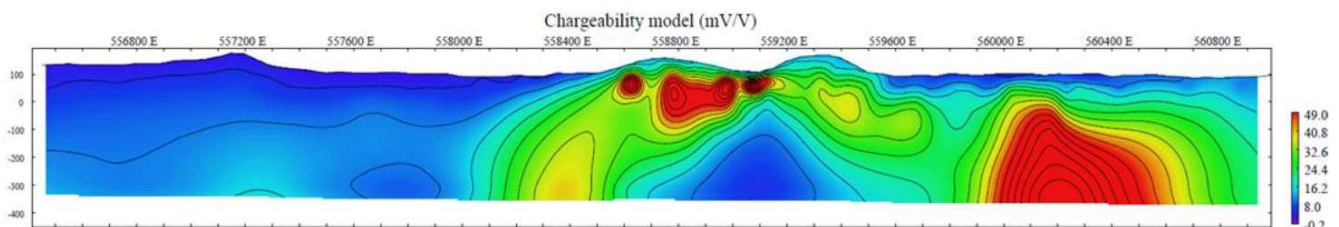


Figure 3. Images of a preliminary pole-dipole (A-A') IP section response acquired across the extensive gradient array response shown in Figure 1. The A-A' section reveals an arcuate, multi-kilometre chargeability high (red-yellow), interpreted as the outer sulphide shell of a preserved porphyry system. Additionally, the several hundred-metre-wide chargeability high to the east may represent buried sulphide mineralisation, potentially analogous to an intrusion-related gold system like Mount Leyshon.

Coincident Geochemical Anomalies

High temperature potassic alteration has been mapped to the northeast of the IP anomaly with coincident elevated molybdenum in soils. Gold, silver and copper in soils become more elevated to the southwest of the IP anomaly (Figure 4). Surface base metal anomalism also shows a strong correlation to the newly identified IP target (Figure 5). Rock chip samples taken in the southwest contain stockwork veining grading up to 10.5 g/t gold.

The local geology consists of late-Permian to early-Triassic biotite granite and microgranite intrusives. Abundant granophyric and miarolitic textures indicate that the magmas were saturated with fluids during crystallisation. Several breccia pipes containing elevated gold and silver outcrop on the southwestern flank of the IP anomaly (Figure 2).

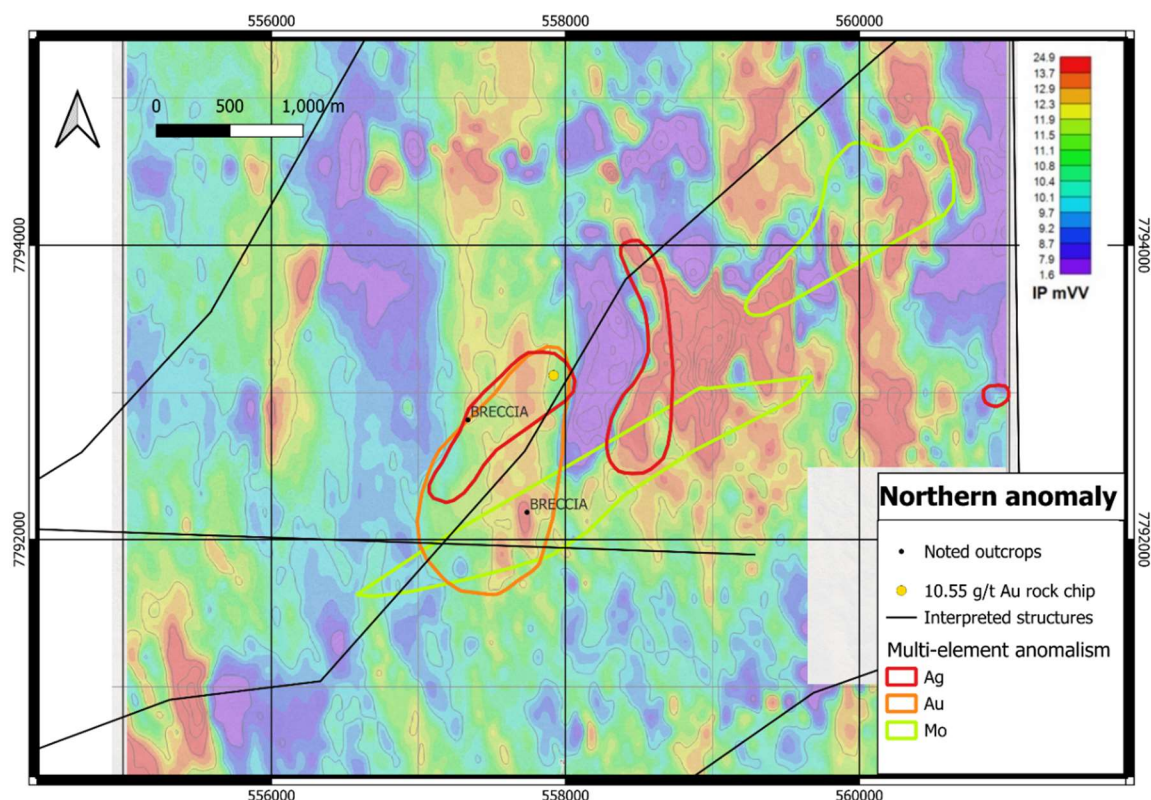


Figure 4. Surface anomaly of precious metals over gradient array IP survey.

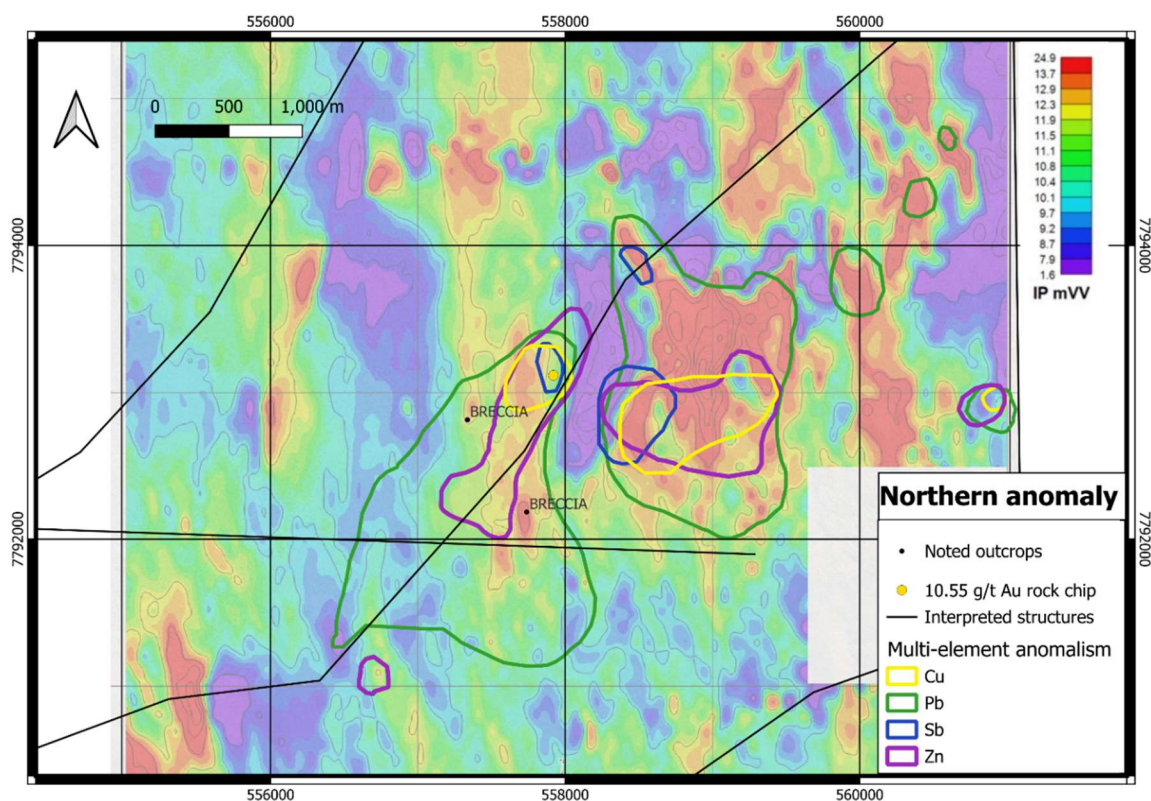


Figure 5. Surface anomaly of base metals over gradient array IP survey.

Next steps

The gradient array IP anomaly will be followed-up with a three-dimensional (3D) IP survey to define the target and improve the exploration model ahead of drilling. The 3D IP survey is expected to commence in November 2024. It is envisaged that drill testing of the targets will commence once heritage surveys have been completed and after the cessation of the northern Queensland wet season in 2025.

Planned and ongoing works at other target areas in the north of Edinburgh Park include:

- Ongoing IP surveys, currently over the Molongle and Mt Dillon target areas
- Helicopter-borne aeromagnetic (HeliMag) surveys
- World View 3 optical imagery, incorporating short-wave infrared (SWIR) data collection
- Mapping and ground truthing by Gold Fields geologists and consultants. The team includes highly regarded porphyry specialist geologist, Nick Tate.

About Edinburgh Park

Edinburgh Park is a province-scale project comprising 11 granted exploration licences at the northern end of the New England Orogeny, the youngest and easternmost of the east Australian orogens spanning from New South Wales to northern Queensland. It is host to multiple large-scale gold and base metal deposits.

Edinburgh Park is located approximately 100 km southeast of Townsville and encompasses an area of ~1,750 km² surrounding the high sulphuration epithermal Mt Carlton gold-silver-copper mine (Figures 6). The Project is prospective for copper-gold porphyry systems, both high and low epithermal gold systems and intrusive related gold systems. Prior to the Gold Fields earn-in, GSN identified up to 29 prospective targets over the Project area.

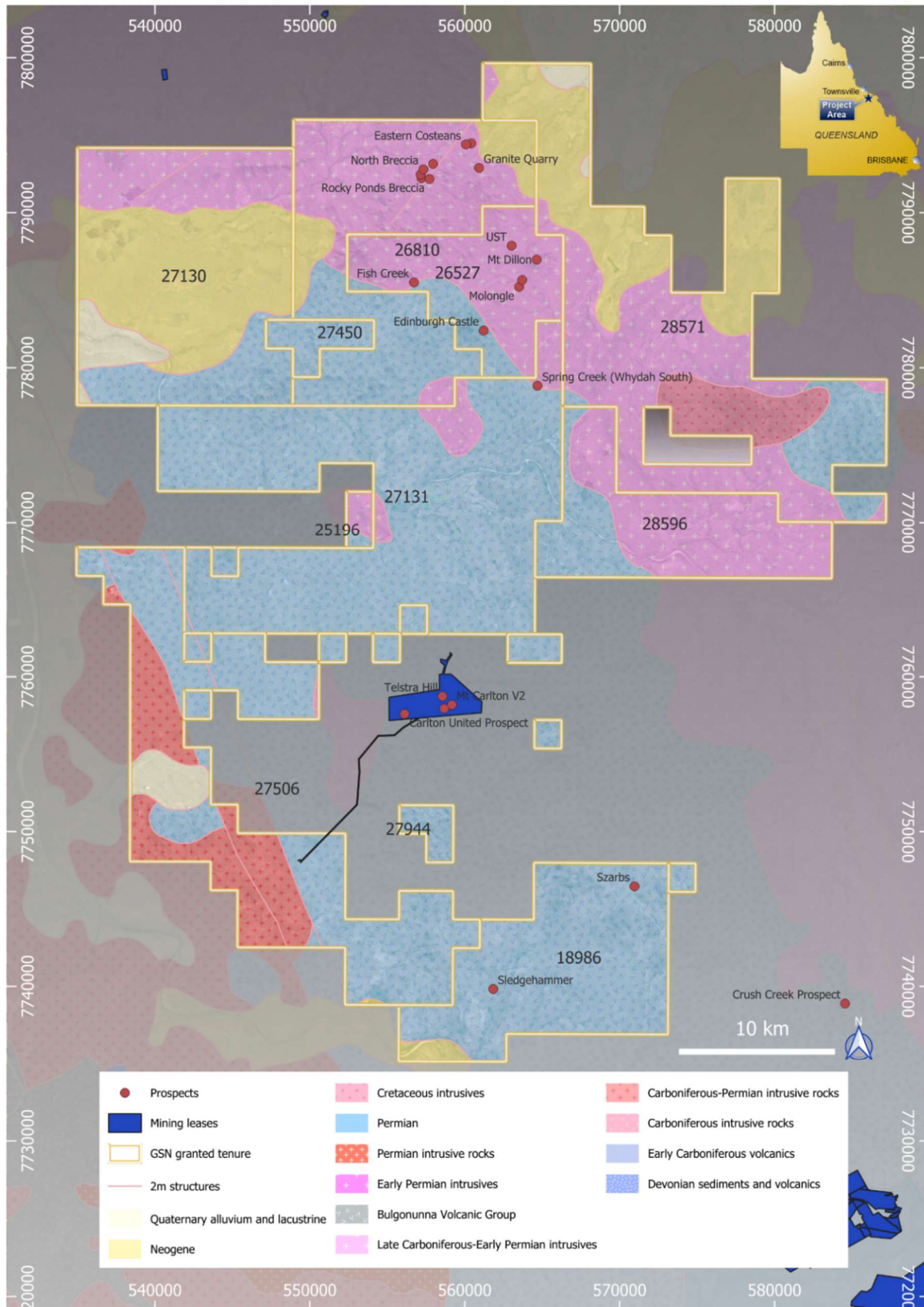


Figure 6. Tenure map and location of the Edinburgh Park Project over interpreted Geological Survey of Queensland basement geology showing key target areas and the Mt Carlton mine (Evolution Mining)

Gold Fields Earn-in Agreement

In October 2023, GSN entered into a binding Option and Joint Venture Agreement with G Ex Australia Pty Ltd, a wholly owned subsidiary of Gold Fields Ltd, on the Edinburgh Park Project. Under the agreement, Gold Fields can sole fund up to A\$15 million in exploration expenditure over a six-year period to earn a 75% interest in the project. A minimum A\$2.5M must be spent in the first two years of the earn-in period.

In conjunction with the agreement, Gold Fields invested A\$1M for a 38.5M shares in GSN, representing a 5.2% stake at the time (currently 4.5%).

.....

The release of this ASX announcement was authorised by the Managing Director on behalf of the Board of Directors of the Company.

For Further Information Contact:

Matthew Keane

Managing Director

admin@gsml.com.au

+61 8 9240 4111

About Great Southern Mining

Great Southern Mining Limited is a leading Australian listed exploration company. With significant land holdings in the world-renowned mining districts of Laverton in Western Australia and Mt Carlton in north Queensland, all projects are located within 40 km of operating mills and major operations.

Competent Person's Statement

The information in this report that relates to exploration results at the Duketon Gold Project is based on, and fairly represents, information and supporting documentation compiled and/or reviewed by Ms Rachel Backus. Ms Backus is an employee and Senior Exploration Geologist of Resourceful Exploration Services Pty Ltd (ABN 29 661 905 193) and has been engaged by Great Southern Mining Limited. She has sufficient experience relevant to the assessment and of this style of mineralisation to qualify as a Competent Person as defined by the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves – The JORC Code (2012)". Ms Backus consents to the inclusion in this report of the matters based on the information in the form and context in which they appear.

Forward Looking Statements

Forward- looking statements are only predictions and are not guaranteed. They are subject to known and unknown risks, uncertainties and assumptions, some of which are outside the control of the Company. Past performance is not necessarily a guide to future performance and no representation or warranty is made as to the likelihood of achievement or reasonableness of any forward-looking statements or other forecast. The occurrence of events in the future are subject to risks, uncertainties and other factors that may cause the Company's actual results, performance or achievements to differ from those referred to in this announcement. Given these uncertainties, recipients are cautioned not to place reliance on forward looking statements. Any forward- looking statements in this announcement speak only at the date of issue of this announcement. Subject to any continuing obligations under applicable law and the ASX Listing Rules, the Company, its directors, officers, employees and agents do not give any assurance or guarantee that the occurrence of the events referred to in this announcement will occur as contemplated.