EL31383 - SGC PROSPECT UPDATE

Coincident gravity & magnetic anomaly - Interpretation Report Update

Executive Summary

The SGC prospect is located in the southwest part of EL31383, in the extreme southwest corner of the Northern Territory. Refer Figure 1. The prospect comprises an isolated seven milliGal gravity anomaly coincident with a 1,200 nT aeromagnetic anomaly about 1.5 kilometres long striking east-west. Refer Figure 2. Using data recorded on a 250x250m grid in 2018, the source of the gravity anomaly was interpreted to be a distinct geological unit 250 metres wide at very shallow depth, and density up to 3.4 gm/cc.

In 2020 one detailed gravity traverse was completed to confirm the shape and amplitude of the anomaly. These new data confirmed the model is valid, and further enhanced the maximum amplitude from a previously reported five milliGals to seven milliGals.

There is no outcrop, and the lithology of the high-density source is unknown. This is a standout gravity anomaly in terms of amplitude and should be drilled to test the nature of the source and for any possible associated mineralisation such as gold, PGE's and chromium.

Preamble

EL31383 was granted to Gempart (NT) Pty Ltd in August 2016. It is on land administered by the Petermann Land Trust. Geophysical data acquired in three phases over the southern part of the tenement area comprises:

1. VTEM on 500 metre north-south flight lines in 2017.
2. Ground gravity on 500x500 metre centres with infill to 250x250m in 2018.
3. Helicopter-borne magnetics and radiometrics on 200 metre flight lines in 2019.

The gravity and magnetics data defined a distinct, isolated coincident gravity and magnetic anomaly referred to as SGC (Surveyor Generals Corner) prospect. Interpretation was described in detail in a report to Gempart titled "EL31383 SGC Prospect Interpretation Report" dated June 2019. This memo is a brief update incorporating the results to emerge from one additional traverse of gravity readings acquired at 50 metre intervals across the centre of the anomaly in February 2020.

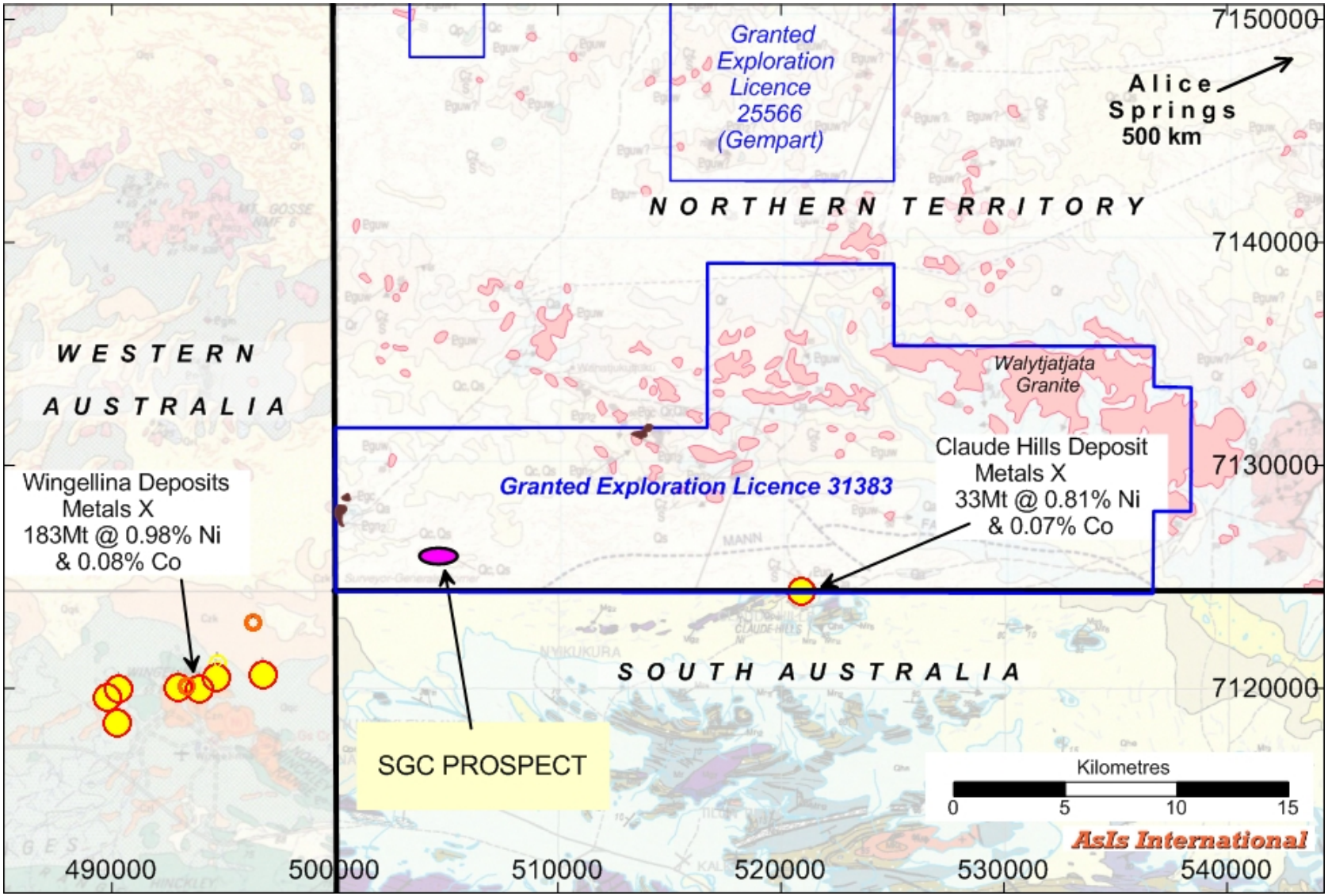

Figure 1. Location Map showing SGC prospect, EL31383 and lateritic nickel deposits.

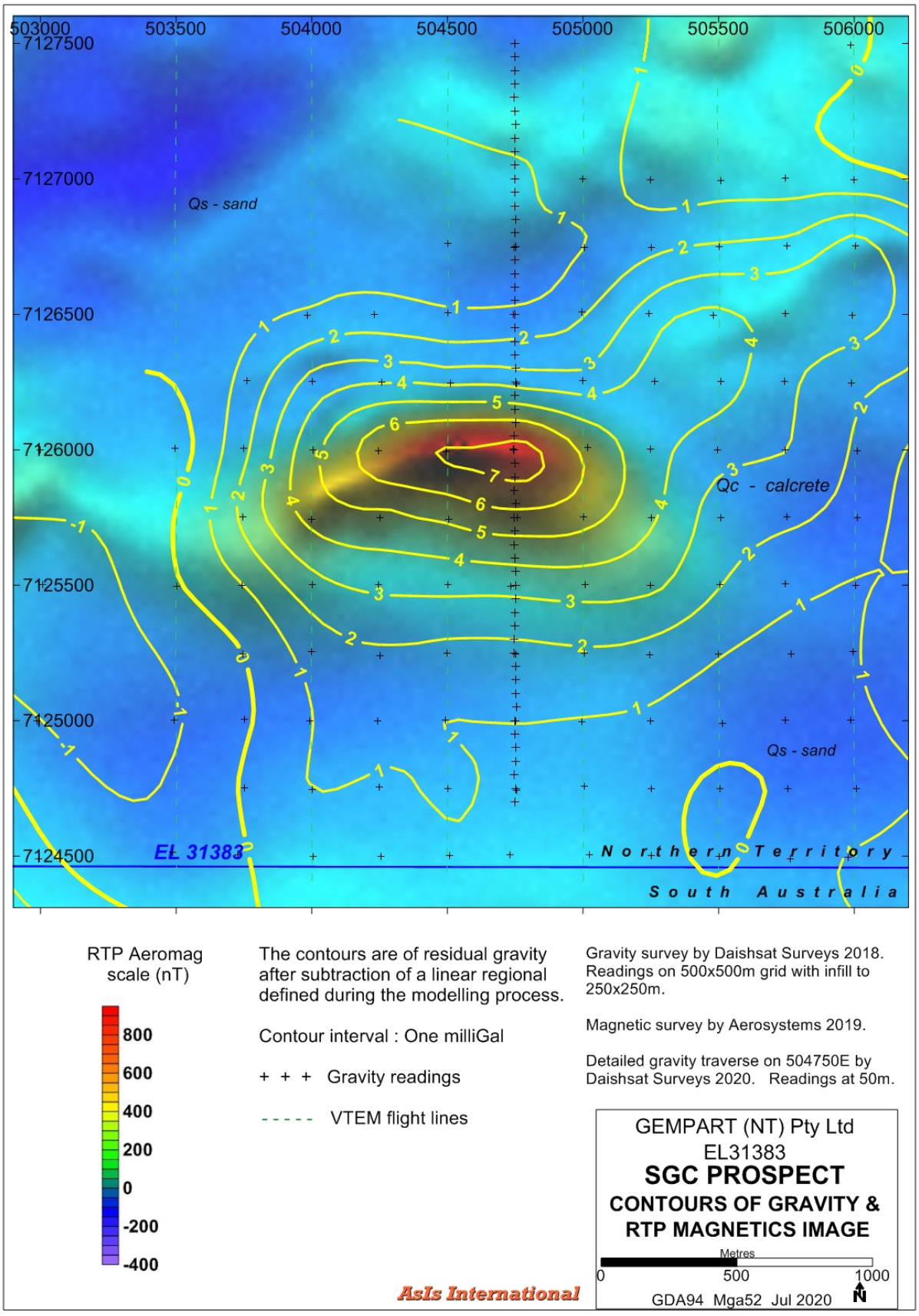

Figure 2. Gravity and aeromagnetic response of SGC prospect.

Geology

On a regional scale there is scattered outcrop of Walytjatjata Granite (Pguw) of the Mesoproterozoic Umutju Granite Suite, with rare outcrop of un-named gneissic granite (Pgc) and layered and felsic gneisses (Pgn2) assigned to the Mesoproterozoic Musgravian Event. Ultramafics of the Giles Complex crop out fifteen kilometres to the east, and to the WSW, of the prospect.

Within the prospect area there is no outcrop. The geology is mapped as Quaternary sands (Qs) with calcrete (Qc) developed over the source of the gravity/magnetic anomaly.

Interpretation of VTEM, aeromagnetics and gravity

The VTEM data acquired on 500 metre flight lines did not record any response over the magnetic/gravity anomaly.

Profiles of magnetic intensity from the airborne survey were forward modelled on a line-by-line basis to determine source geometry. The final model is an arcuate south-dipping body two kilometres long, within 25 metres of the surface in the centre and plunging to 100+ metres depth at each end. The maximum susceptibility is 0.2 SI equivalent to about 12% magnetite content.

Gravity modelling was carried out on north-south profiles at 250 metre intervals using the actual data acquired on the 250x250 metre infill grid. The final model is a complex south-dipping body 1 ½ kilometres long, within 15 metres of the surface in the centre and plunging to 50 metres at the western end and 100+ metres at the eastern end. Density is 3.4 gm/cc.

Incorporating detailed gravity data acquired in 2020 at 50 metre intervals on line 504750E, the anomaly amplitude is slightly enhanced. The interpreted model has been revised and the highest density has increased from 3.4 to 3.5 gm/cc. This is at the uppermost level of rock densities; peridotite and gabbro densities are quoted as 3.0-3.4 gm/cc.

The geophysical profiles and modelled cross-section on line 504400mE using the original data is shown at Figure 3, and the updated model using the additional gravity data shown at Figure 4. A simplified outline of the model is shown at Figure 5. A proposed drillhole to test the interpreted 3.5 gm/cc body is shown on the plans at coordinates 504750mE 7125800mN.

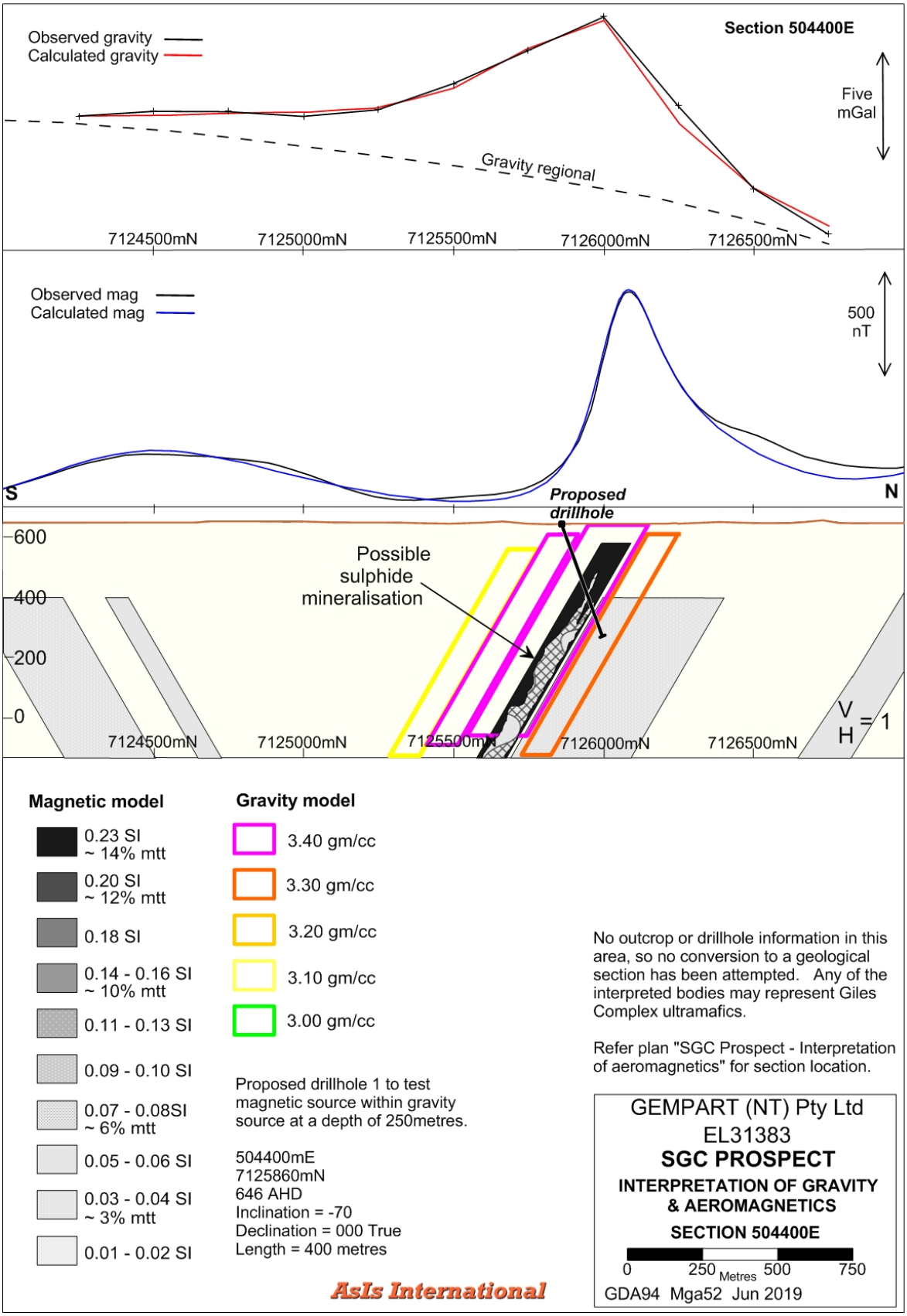

Figure 3. SGC prospect Interpretation of gravity and magnetics on section 504400E.

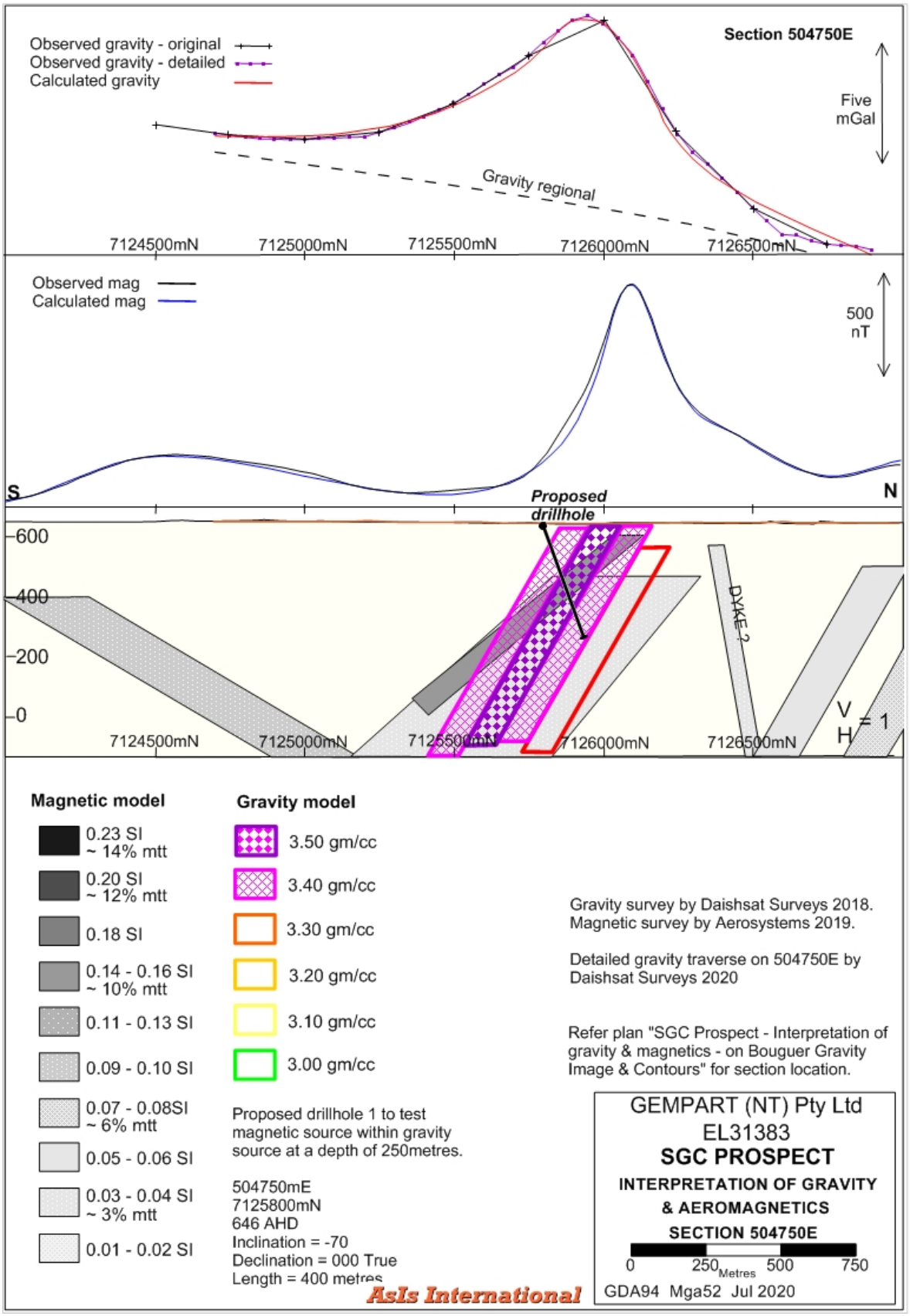

Figure 4. SGC prospect Updated Interpretation of gravity and magnetics on section 504750E.

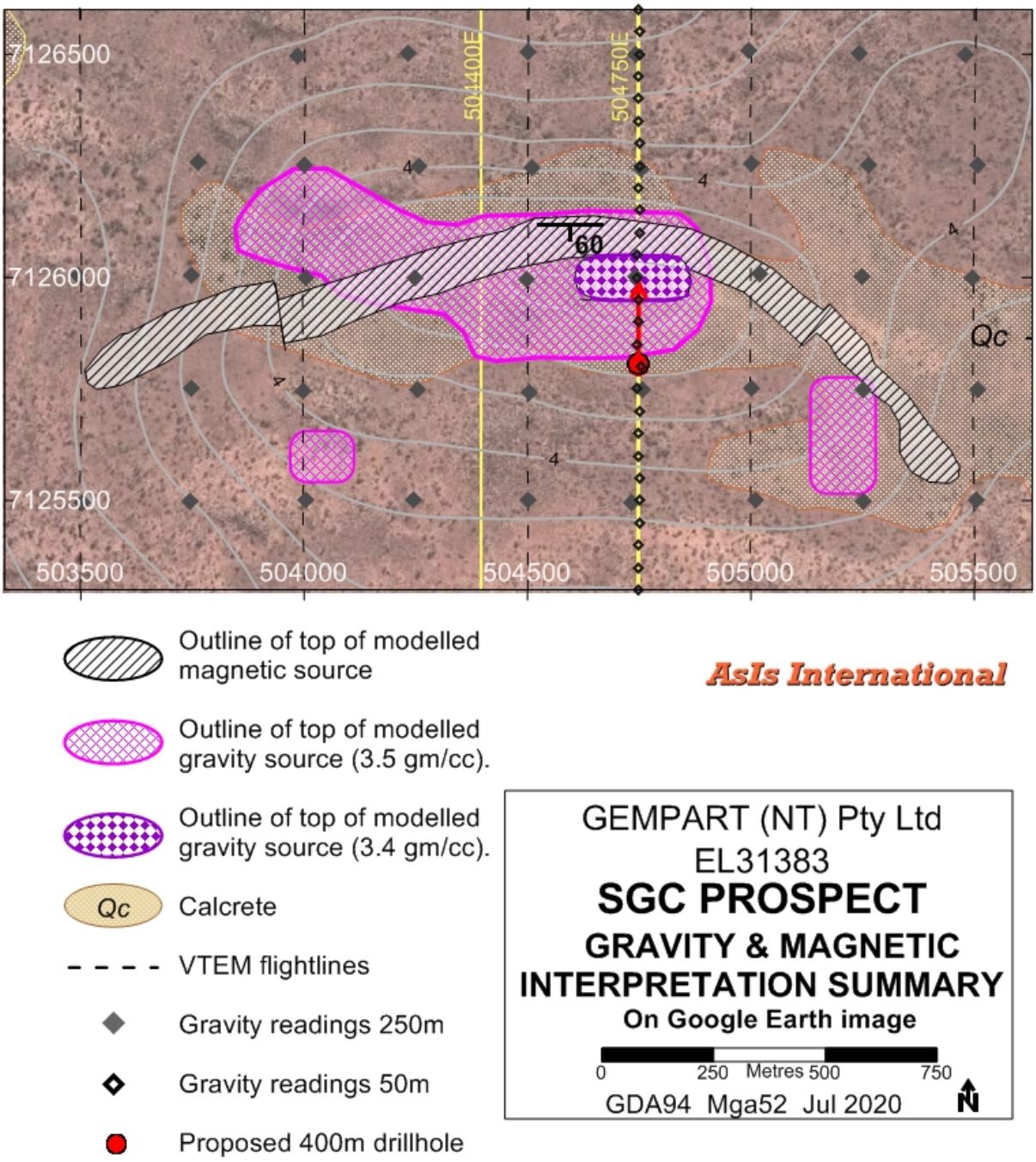

Figure 5. SGC Prospect. Summary of updated gravity & magnetic interpretation, and proposed drillhole.

Economic Potential

Results of modelling indicate a plausible source of the magnetic and gravity anomaly is mafics/ultramafics of the Giles Complex. These outcrop 15 kilometres to the east, near the SA/NT border at the Claude Hills Nickel deposit, and 15 kilometres to the WSW at the Wingellina nickel deposits in Western Australia; refer Figure 1. Also, the presence of calcrete coincident with the anomaly source indicates a local topographic low, which may be caused by preferential weathering of a quartz-poor lithology.

At the Claude Hills nickel deposit, a lateritic nickeliferous ochre deposit has developed from extreme leaching and then enrichment of a peridotite-gabbro intrusion. Due to the leaching, the deposit is coincident with a gravity low and has no significant magnetic expression. At Wingellina, numerous limonitic deposits have formed via deep oxide weathering of dunite units of the Wingellina Layered Intrusive Complex. Due to the deep weathering, the deposits have a small or no magnetic signature.

At the SGC prospect, the positive gravity and magnetic anomaly could represent unweathered ultramafic, with potential for primary nickel, chromium and PGE mineralisation. Although there is no significant response in the airborne EM data, sulphide mineralisation may be at depth.

Recommendations for further work

It is recommended that the modelled source of the observed gravity and magnetic anomalies be drilled to test for economic mineralisation. A single angled drillhole is initially proposed to test, at a depth of 250 vertical metres, the modelled gravity source of highest density where it coincides with the modelled susceptibility. Collar information is:

Easting	: 504750	Inclination	: -70
Northing	: 7125800	Azimuth	: 000 degrees True
RL	: 646 metres	Length	: 400 metres

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