



SOUTHERN GEOSCIENCE CONSULTANTS

Pty Ltd ABN 69 067 552 461
8 Kearns Crescent Ardross WA 6153 AUSTRALIA
Web: www.sgc.com.au

Bill Peters 61 8 9316 2814
Bruce Craven 61 8 9316 2804
Kim Frankcombe 61 8 9316 2074
Graham Jenke 61 8 9316 2801

Telephone: 61 8 9316 2074
Fax: 61 8 9316 1624
email: bruce@sgc.com.au

Memo

To: David Wise,

From: Bruce Craven

Company: Maiden Meadow Pastoral

Date: August 19th, 2005

Project: Langdon's Hill, Cygnet EL34/2001

David,

Sorry about the time it has taken to get back to you. Things have been a bit hectic here.

I have been through the material you sent in some detail. I think I understand what you want re your request about quantifying what you could have in the ground. In strict terms, this is not really possible with the material you have sent and, more fundamentally, with the exploration data that you have available.

From the information you have sent, it seems to me that the main issues are:

- Does the prospect contain economically significant mineralization?
- If so, what is the potential size? (Your bottom line question, I think).

Having been through the data and your geology summaries, I am concerned about the strength of the alteration and mineralization that could be present. As whoever put your summary together has said, the surface geochemistry is disappointing. It points out some trends and gross patterns, but it lacks strength and consistency. Unless the surface (regolith) conditions mean that the surface samples are not a reliable indication of the bedrock geochemistry, the surface sampling is not encouraging for the presence of a substantial body of economic mineralization near surface. It certainly doesn't seem compatible with the alluvial gold to the south, unless there has been a fair degree of concentration in the alluvials.

I have not reviewed your comments on the alteration in detail. It may be mostly simple, contact metamorphism rather than a full on, porphyry copper style assemblage. The classical porphyry assemblage and pattern is well documented and your geological people should be able to make a reasonable comparison between what you have and what the typical porphyry copper system looks like. Though the syenite intrusive is probably a good deal more extensive, the Langdon's Hill prospect and contained intrusives are quite small compared to significant porphyry copper ± gold systems. Based on the smallish scale of the intrusive-alteration system, the subdued geochemistry and what appears to be a fairly low overall sulphide content (from the I.P. data), I think the chances of a significant, disseminated (low grade), bulk mineable copper ± gold deposit within the Langdon's Hill prospect are low. Mineralization associated with the NW structures that have been mentioned are better.

Of the geophysical targets that have been identified, I think your target B is the most encouraging. The coincident magnetic-chargeability anomalies have a bit of associated geochemistry, albeit weak. I can't gauge the strength of the I.P. or magnetics anomalies from the Powerpoint images. I would need access to the original data so I could look at the magnitudes. The geophysically anomalous zone is about 400-500m long. It could continue or be repeated further along strike to

the north-west. It looks shallow. If so, the weakly anomalous geochemistry could be a fair indication of the strength and character of the mineralization/alteration. It is hard to estimate the width; probably $\leq 25\text{m}$. Depth extent is unknown, but could be reasonable. We may be able to get an indication from modelling the magnetics and or I.P. Nigel Hungerford may already have done this.

I can't get much feel for the dip, other than I think it is more likely to be steep than flat. Modelling could help sorting out the dip as well. The zone offers much more potential as a steeply dipping entity than as a shallow dipping one. You could fit a reasonable sized orebody within a 500m long, 200-500m deep, 5 to 10m wide alteration-mineralization zone. A steeply dipping zone leaves open the possibility that the mineralization strengthens at depth. I noted the proposal to test this zone with a vertical drill hole. Unless there are strong geological reasons for doing this, I think you would be better advised to test the zone with angled holes, particularly if the dip is likely to be steep.

I am cautious about your I.P. anomaly A. If viewed as a vein-lode style system, this has similar or greater size potential to anomaly B. My concerns are the lack of anomalous geochemistry and the possibility that the high chargeabilities are mapping primary sulphide \pm carbonaceous material in the sediments rather than an epigenetic alteration system. It looks like Nigel has modelled the depth to the top of the I.P. anomaly at 80m. This is deeper than I would have expected, but I can't really tell from the image data. As for anomaly B, I can't get much idea of the likely sulphide \pm recrystallized carbonaceous material content that produced the chargeability anomaly. The associated resistivities are high, which means that lower sulphide levels are required to generate a moderate to strong chargeability anomaly. This is not a serious issue if you view the target as an epigenetic, vein style system. However, if the alteration zone sub-crops, the lack of associated anomalous geochemistry is discouraging.

The 250m drill hole that has been proposed to test this anomaly is quite long and would intersect the interpreted source of the I.P. anomaly in the upper part of the hole. I guess the lower part of the hole is designed to test the geochemical anomalies further to the north-east. This seems reasonable, but it may be more cost effective to test the different targets with two shorter holes. The hole you have proposed would give you a good look at the sub-surface geology and alteration, which could be important at this stage of your exploration.

I suspect that your bullseye magnetic anomaly is related to sub-cropping syenite \pm local alteration. I can't tell from the Powerpoint images how intense or anomalous this zone is relative to the rest of the magnetic syenite. Judging relative magnetic intensities from first or second derivative images can be quite misleading. A sub-cropping magnetic body may look significantly stronger than a similar but slightly deeper body in FVD data. The normal TMI data should be checked to make the comparison. It looks like you have had a good geological look around this feature. The subdued nearby geochemistry and I.P. responses are not encouraging.

Overall, it seems to me that Langdon's Hill is a conceptually good and interesting exploration play, with an intrusive emplaced into reactive rocks along a regionally significant structure. However, the strength and size of the intrusive related alteration system seems questionable. I don't think the potential for a largish, bulk mining copper-gold deposit is great. In my opinion, you would be better off concentrating on the smaller, structurally controlled targets. If they are associated with high grade mineralization, both anomalies A and B have the potential to host economically significant deposits if the zones are steeply dipping and depth extensive.

From an exploration point of view, it looks like you have done the obvious and logical things over the prospect. The key questions are the reliability of the geochemistry as an indication of sub-surface mineralization and the significance of I.P. anomalies A and B. Depending on what Nigel has put together in terms of modelling and interpretation, it should be possible to define the extent of the syenite and faults from the magnetics and I.P.-resistivity data. We may also be able to firm up the dip of the anomalous zones from the I.P. or magnetics. We would need access to the digital data, preferably line data, to tackle this.

Apart from some possible tidying up as discussed above, it seems to me that the Langdon's Hill exploration has progressed to the point where the major anomalies are either drill tested or discounted. From a space point of view, anomalies A and B could contain steeply dipping bodies of mineralization of economically significant proportions. However, your sampling to date does not seem to have produced particularly good indications of strong or ore grade mineralization within the prospect area.

Please contact me if you have any questions on my comments.

Regards,

Bruce Craven