

## Scotgold Resources Limited

### Exploration Update

### Summary Report

### Conclusions from Orientation Surveys conducted over the Cononish Project Orebody

#### **Background:**

Scotgold has historically used various traditional exploration techniques to identify anomalies with a view to generating drill targets and, potentially, future mineral resources. Principal amongst these has been soil and stream sediment sampling to identify gold-bearing zones. It has been recognised however that the history of glaciation over the last 30,000 years has spread anomalous sediment particles across the region, causing a number of false anomalies.

In addition to the above, geochemical techniques that rely on a full digest of the sample are known to be susceptible to very fine gold “nuggets”, such that very large samples are required to produce representative results. The sample sizes required are much larger than those typically collected during exploration programmes.

Scotgold recognised that a different survey technique was required in order to counter the above challenges and generate geochemical anomalies representative of the geology and mineralisation in the bedrock (for soils) and catchment area (for streams). Scotgold worked with Dr Russell Birrell of Glob-Ex Solutions, a leading exploration geochemist, to apply modern partial leach techniques that analyse for mobile metal ions on the surface of sediment particles. This technique is known as “**ionic leach geochemistry**” (see **note 1**).

Separately, the Company historically evaluated Very Low Frequency (“VLF”)/magnetics and Induced Polarisation (“IP”) Gradient Array geophysical surveys with limited success. The techniques worked well to map the bedrock geology, but failed to “see” deep enough to help define the geology in three dimensions.

Orientation surveys have been conducted over the known Cononish Project Orebody, in order to evaluate the efficacy of the new exploration techniques in identifying bedrock mineralisation and to establish optimum parameter settings, such as sample spacing, as well as data processing methods

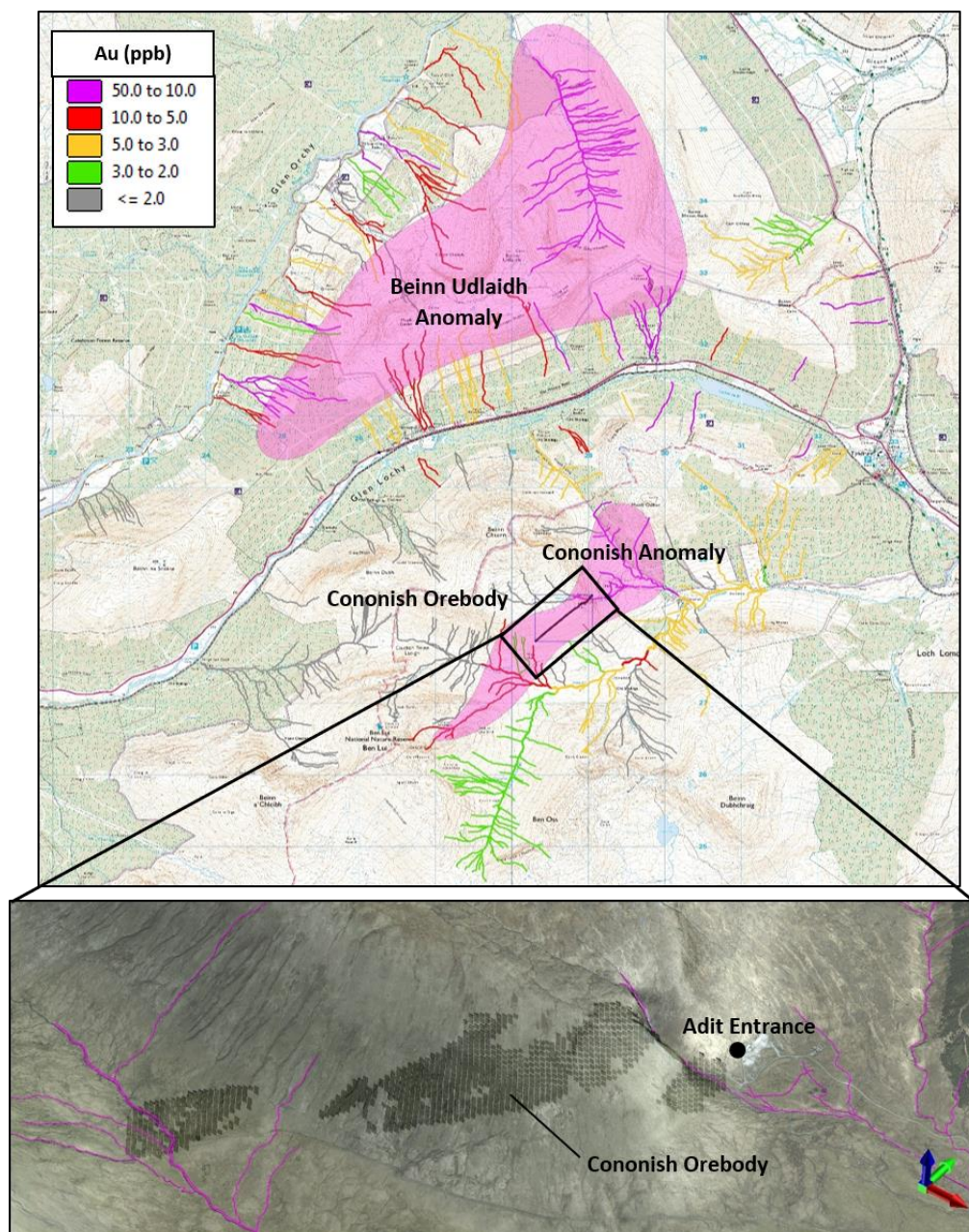
#### **Ionic leach of Soil and Stream Sediment Sampling:**

The new ‘ionic leach’ method employed by our geology team allows for a significantly lower limit of detection across a much wider range of elements, making it a more sensitive technique that produces higher resolution data. It is also a much simpler sampling technique, which facilitates a cheaper and speedier survey.

During analysis, an ionic leach extractant is applied to the sample to specifically target mobile metal ions on the surface of particulates. Consequently, there is a focus on more dispersed geochemistry in the sample, rather than a reliance on focused gold mineralisation, as required by traditional techniques. As noted above, traditional sampling techniques are subject to the erratic distribution of specific minerals, particularly gold.

## Stream Sediment Sampling

The results of the initial ordination drainage survey were a success in both proving the application of the new technique, and in providing higher resolution anomalies over the wider Cononish area. As seen in **Figure 1** below, the technique produces a strong positive anomaly in the area bounded by the drainages to the north east and south west of the estimated Cononish Project Orebody. The same techniques and parameters were then applied in the Beinn Udlaidh area to the north of Cononish. The Company is particularly encouraged by the scale of the Beinn Udlaidh anomaly produced. Previous drainage surveys did not produce such clear cut and unambiguous results. The Company also applied the ionic leach technique to raw water samples, but this did not prove to be successful.

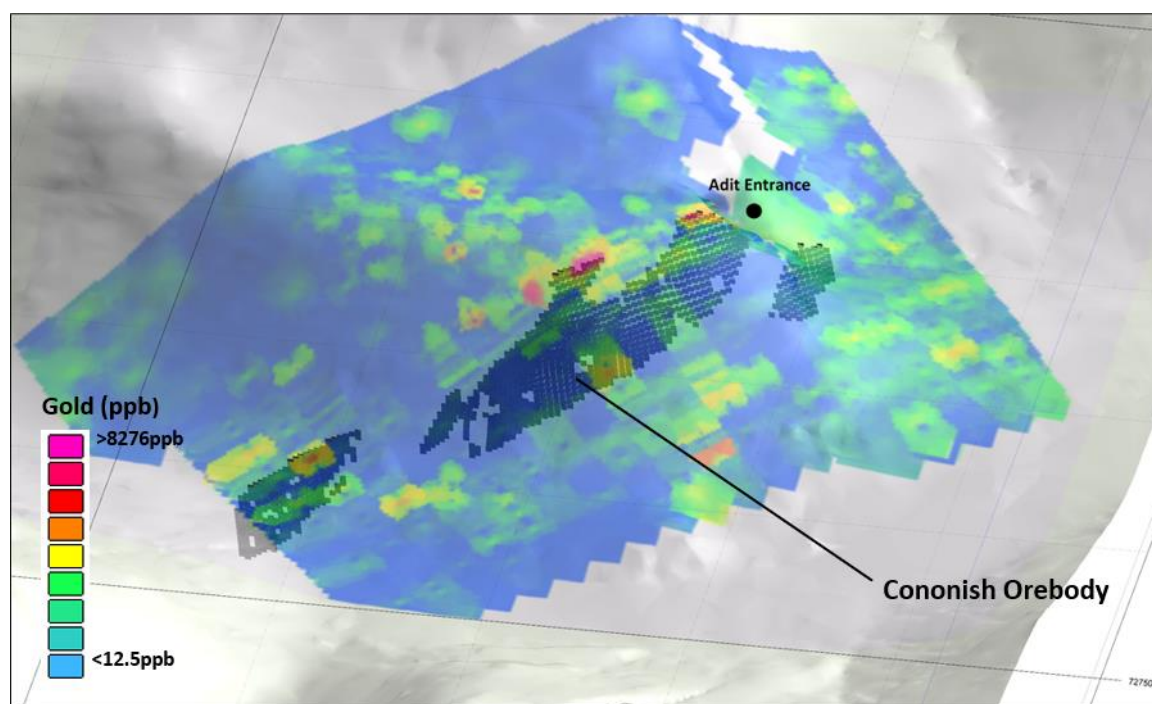


**Figure 1-** Stream sediment sampling of the Cononish and Beinn Udlaidh anomalies using Ionic leach with inset showing relative location of Cononish Project Orebody.

## Soil Sampling

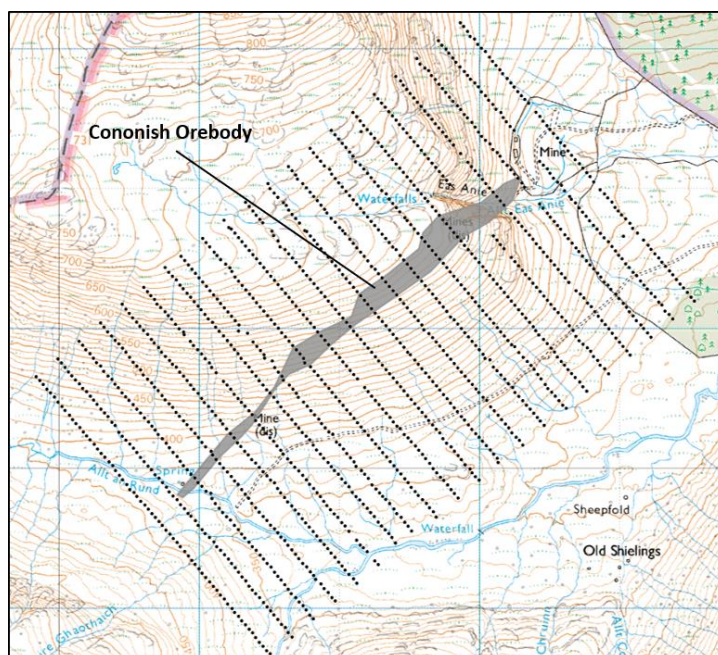
Having established an anomalous area through stream sediment sampling, the next level of detail was obtained by conducting a systematic soil sampling campaign over the area.

As shown in **Figure 2** below, historic sampling using conventional analysis techniques over the Cononish Project Orebody produced erratic gold anomalies along the host structure. These correlate to subcrops of mineralised quartz veining but does not give any indication of potential mineralisation in nearby structures.



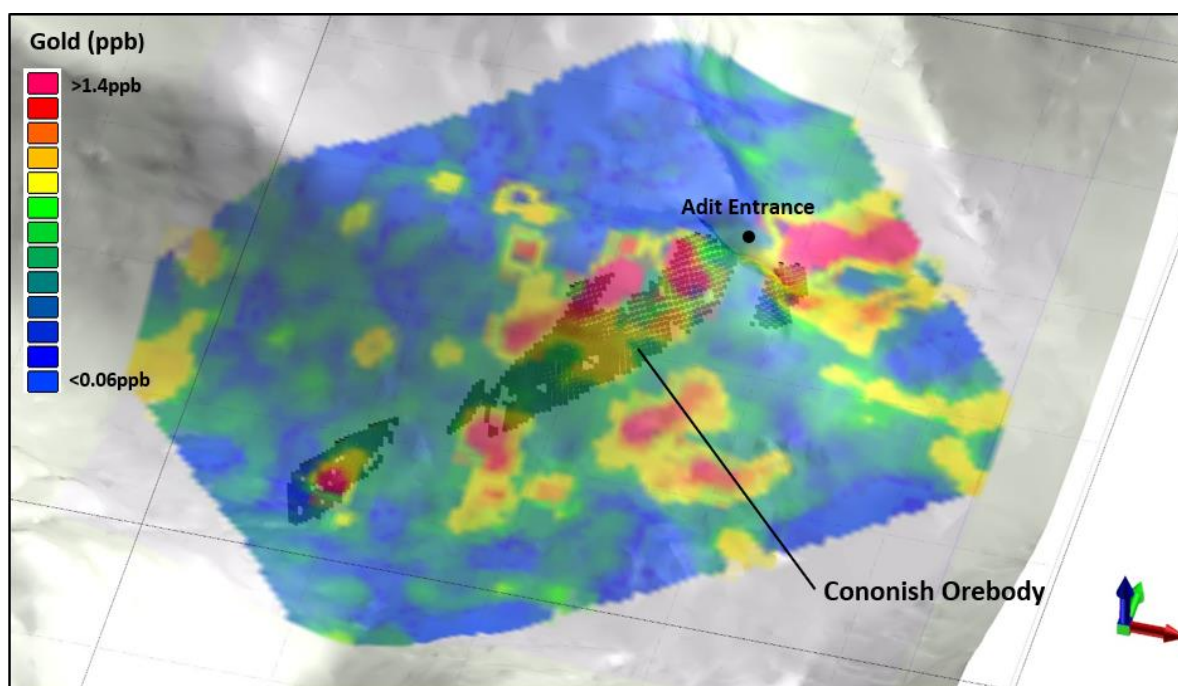
**Figure 2 - Isometric view of Cononish Mineral**

For the Soil Sampling Orientation Survey, samples of A-horizon soils, collected at a depth of 10-20 centimetres, were collected on a 20 x 100 metre grid as shown in **Figure 3** below.



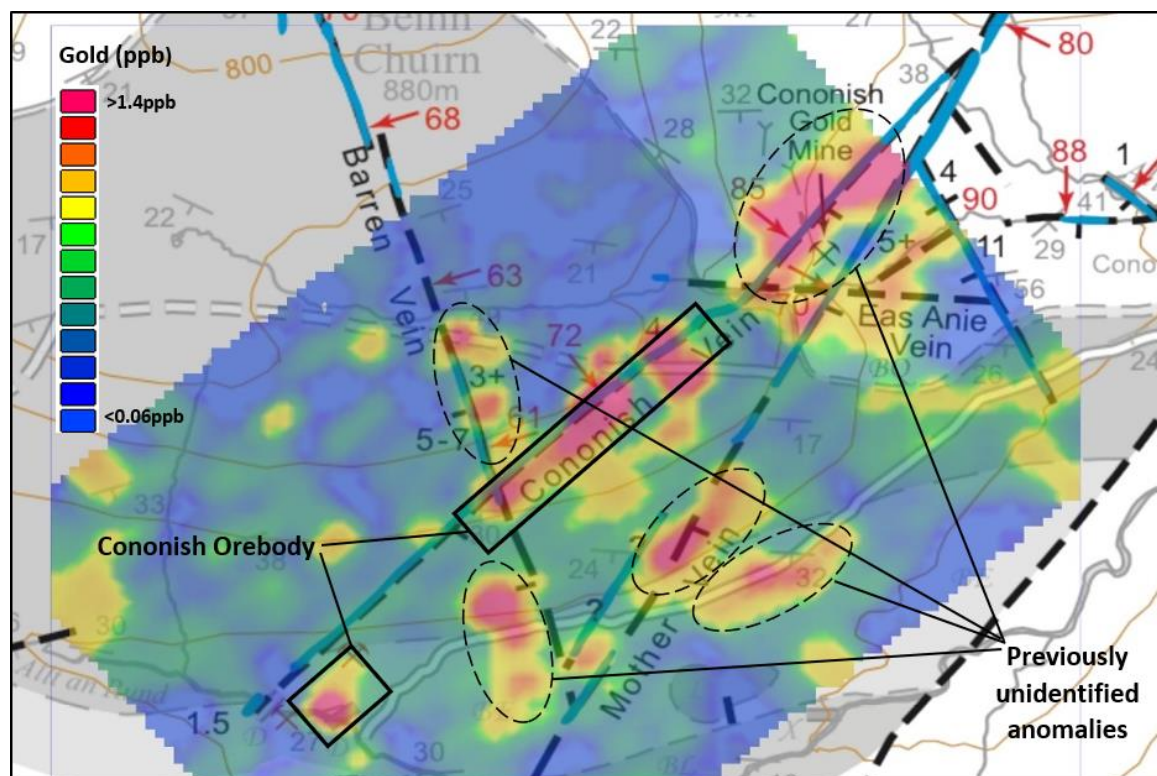
**Figure 3** - Soil Sampling Orientation Survey grid over Cononish Orebody (grey).

The ionic leach data received for the above samples is of a much lower tenor than for conventional assays. It also includes a greater number of elements, which provides more options for identifying usable pathfinder elements. **Figure 4** is a composite image of anomalous elements. It clearly identifies the full extent of the current Cononish Project Orebody.



**Figure 4** - Isometric view of Cononish Mineral Resource overlain by new Ionic soil sampling results.

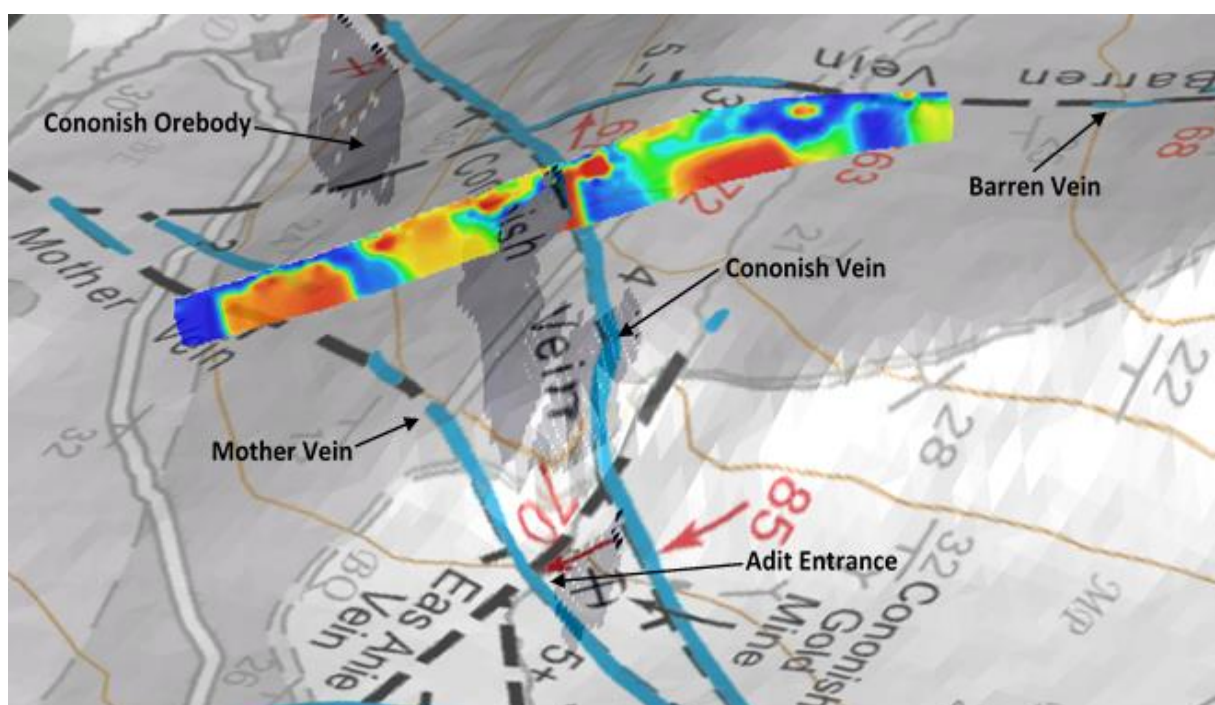
Not only has this new technique been able to map mineralised sections of the Cononish Vein, it has identified further anomalies associated with off-setting faults and structures in the immediate vicinity. These new anomalies are shown in **Figure 5** below and as can be seen are associated with the Mother Vein and so-called Barren Vein structures interpreted from the extrapolation of mapped veins.



**Figure 5** - Ionic leach soil anomalies overlain on structural map of Cononish area. Previously unidentified anomalies circled

Alongside the identification of geochemical anomalies, the collection of a larger data set has allowed the determination of a fingerprint of gold proxies / pathfinder elements allowing for a Cononish style of mineralisation to be established and applied to other prospective areas. The understanding of these 'signatures' is currently forming part of an ongoing PhD research project with Glasgow University.

**IP and VLF/magnetics** In addition to the novel geochemical sampling approach, Scotgold conducted an orientation survey using induced polarisation dipole-dipole and VLF/magnetics techniques. While the survey was cut short due to very bad weather, the initial results have shown that the selected survey techniques are an excellent method of mapping the geology of the Cononish deposit in three dimensions. This is particularly the case with the dolerite dyke and major structures. The survey will be extended in the spring so that we can complete the 3D modelling of the Cononish Project's geology.



**Figure 6** - Isometric view of section generated by generated by IP Survey

## Conclusions

Scotgold is pleased to report on the successful identification of new exploration techniques. The application of these techniques will ensure a more efficient, systematic and targeted approach to future exploration. Ionic leach stream sediment sampling can be used to define prospective catchment areas at the district and regional scale that will allow our geologists to focus in the best areas. Ionic leach soil sampling can then be used, together with geological mapping, to identify the prospective areas at the prospect scale. The identified ground geophysics techniques can be used to map the bedrock geology in three dimensions and allow for optimal drill hole planning.

**Note 1** Ionic Leach™ is a static sodium cyanide leach using the chelating agents ammonium chloride, citric acid and EDTA with the leachant buffered at an alkaline pH (pH 8.5). Samples are digested as collected so there is very little opportunity to lose or introduce elements during the partial leach process. This innovative leach technique is designed for near surface soil samples. It is designed to improve geochemical mapping and enhance the potential to detect and resolve geochemical anomalies for a range of commodity elements