
OBJECT: East-West Gold Property Zone Drill Program Proposal
Complementary to the 43-101 report

SUMMARY

- A core review was performed during 2015 to integrate strain and deformation mapping to the core logging methodology. The main objective was to identify strong structural features that can be related to the Marbenite-Norbenite Faults system. Another goal was to identify evidences of an intrusive system. Literature from surrounding properties like the Kiena Mine deposit located 5 km eastward and the Camflo Mine located 5 km westward of the East-West property have both demonstrated the strong influence of structurally controlled intrusions on gold mineralization.
- A geological interpretation was put in place, initially done on sections and completed by a surface plan. The interpreted repetition of mafic and komateitic flows interlayered with their intrusive counterparts is typical of the Jacola Formation. The interaction between hole to hole correlation and surface observation lead to the interpretation of a remnant of the tight regional folding pattern on the property. Generally, contacts are conformable to the regional structure. Inside the property, lithologies follow a north-west (300°N) to east-west orientation. Units are dipping north from 55 to 65 degrees following possibly a sigmoidal profile.
- Taken more regionally, the property straddles the Jacola – Val d’Or Formations, considered as a geochronological gap of 2 m.y., but mostly as a major change of volcanic environment. The notion of unconformity between major rocks units is a fundamental concept to apply to locate gold deposits, as much on the district scale

as on the property. Other features such as wide carbonatized envelopes and lamprophyre dyke clusters advocate for the interpretation of a tectonic break.

- The Jacola Formation magnetic signature, with alternating high and low magnetic strips, is strongly distinctive of surrounding rocks. The East-West property shows at a closer scale the rotation and disruption of the magnetic pattern going eastward from the West Zone to East Zone. This transition can be considered as a prospective marker for gold mineralization in this area.
- High strain zones are widespread across the rock package, mainly developed along strong competency contrasts exemplified by all contacts between ultramafic flows and gabbroic sills. Their frequency inside a 500 metres wide corridor is a serious argument to pass the Marbenite fault at this location, limited to the south by the Val d'Or Formation.
- Dykes or intrusive masses of intermediate to felsic composition have yet to be identified inside the Marbenite corridor. On the other hand, lamprophyres dykes do occur. Their concentration is clearly higher than what is generally reported from surrounded properties (Niogold 43-101 report on the Marban Project, and Wesdome 43-101 report on the Wesdome Project). Lamprophyres dykes are widespread inside high strain zones of the property and can locally reach 10 metres thickness at the West Zone. At the Raven Zone, they form swarms of 0.1 to 3 metres in thickness, mostly located at ultramafic – mafic contacts. They channelized a good part of the carbonate alteration observed in the mineralized environment, and confirm the deep seated nature of the East-West deformation system.
- A strong chlorite – carbonate alteration overprints mafic host rocks over significant thickness broadly exceeding the gold mineralization outline by a few hundred meters. The systematic description and mapping of this main alteration assemblage done during the last 2011 drill campaign can be used to identify trends and vector for drill planning. Other minerals assemblages locally observed, or just more discreet, like albite, biotite in mafic host rocks, and tremolite in ultramafic rocks can be good pathfinders for gold also.

- Gold mineralization shows different settings and mineral associations that can be grouped into four different targets, summarized below in table 1. The drill database was built to combine holes from all exploration periods even if pre Knick information is poorly constrained. Gold assays from 179 historical holes have been included and combined with the 71 holes drilled by Knick in 2009 and 2011. Within the framework of this evaluation, results from the West Zone were normalized to intervals 2 metres long and their spatial location calculated with Geotic software. The objective of this transformation is to facilitate interpolation of resources potential, and benchmark the potential of the property to other advanced exploration projects in the area.
- For most areas, sampling from historical drilling was concentrated only on quartz veining, disregarding sections of alteration halo. The approach proposed is to cover more systematically alteration assemblage (carbonate, tremolite, chlorite) and high strain zones in an attempt to identify low range gold anomalies that could lead to high grade lenses.
- The proposal is split into two phases. **Phase 1** is developed around multiple objectives to mitigate the risk which is inherent with working a single target objective. Other principles are applied: changing of the scale of observation for each sector, using multiple holes (3 to 5) to obtain enough information to complete a target evaluation. As indicated in Table 1, 100 metre X 100 metre targets are replaced by 500 to 900 metre prospective areas with unique geological definition. This change is automatically reflected by a higher number of holes to drill for achieving a first pass of evaluation.
- The total of **13,400 metres as 58 holes**, split between 4 zones, **is planned for phase 1**. An all inclusive drilling cost of **\$100 /m** can be used considering the local favorable market for the hiring of drill contractors. It corresponds to an overall cost of **\$1,34 million**.
- **Phase 2** retains West Zone and Raven Zone as follow up drill areas with 6,400 metres as 28 holes. The cost is evaluated at **\$640,000** using same unit cost parameters as for phase 1.

Table 1: TARGETS DESCRIPTION

Target	UTM grid location (Nad83)	Description
West Zone	278800E to 279400E	<p>Veins system located inside the Marbenite Deformation Zone.</p> <p>Support: cluster of historical drill intervals >10g/t going from surface down to 200 metres.</p> <p>Objective: transferring historical data to resources, extending the gold zone laterally and down dip.</p>
Marbenite South Bound	279800E to 280100E	<p>Quartz veins stockwork and disseminated pyrite developed on both side of the Jacola – Val d’Or Formation contact.</p> <p>Support: Isolated historical drill intervals in the range of 1 to 7 g/t distributed all along the targeted contact.</p> <p>Objective: extending the sampling to define a gold bearing envelope.</p>
Raven Group	279500E to 280300E	<p>Quartz veins system developed on a NE shear system inside the Marbenite Deformation Zone.</p> <p>Support: Cluster of shallow holes showing the consistency of the gold system inside a 100 m X 100m window.</p> <p>Objective: Finding a stacking of similar NE mineralization, exploring down dip the continuity or repetition of the gold system.</p>
Gilbert	279500E to 280400E	<p>Quartz veins system associated with tremolite schist inside the Marbenite Deformation Zone.</p> <p>Support: Channel sampling results of 40g/t over 0.7m hosted in an exposed 3 metres wide strongly altered high strain zone.</p> <p>Objective: Finding enough positive results in the target area to support more extensive drilling.</p>

ARGUMENTS

West Zone

The gold mineralization is hosted in a main altered and more competent basalt unit of a thickness varying from 30 to 100 metres, actually identified by drilling along a strike length of 400 metres. This unit, specifically altered with silica, albite and tourmaline, marks a contrast with shistosed ultramafic walls. Gold mineralization is associated with quartz vein stockworks with pyritized halos.

Historical drilling probably covered the target with a tight, 12.5m spacing. Data compilation showed a cluster of 87 drill intervals higher than 1 gram of gold per tonne over more than 1 metre inside a volume making approximately 3.24 million tonnes. This gold concentration can not be considered actually measurable. The multidirectional drill pattern is beyond comprehension, holes location can not be verified, and many holes were poorly sampled.

The plan proposed is to work out three aspects:

- Confirming the resources potential of historical data by adding a regular 25 X 25 metres drill pattern.
- Extending the deposit laterally for about 200 metres on both sides. Going down dip for another 200 metres, until the property limit is reached to the north
- Testing the possible stacking of a second parallel gold structure located approximately 100 metres southward.

Marbenite South Bound

The target is supported by the repetition of isolated grades in the range of 1 to 7 g/t along a kilometric strike length. These results encompass the Jacola – Val d'Or Formation boundary, which is marked by a strong ductile deformation level developed where andesitic breccia are in contact with ultramafic rocks. Visually, the only hole observed showed disseminated pyrite in foliation planes. The lack of systematic sampling possibly hides a more continuous gold signal.

Raven

The Raven Zone area (including the former East zone) is well known to have produced narrow high grade intervals from low sulfides quartz veins associated with a weak biotite alteration. A tight shallow drilling pattern has shown the difficulty to reproduce results below the main stripped area.

We propose to widen up the exploration window to include the actual East zone, located 100 metres east, and 2 other parallel north-east magnetic structures located up to 300 metres west. The Raven zone characteristics and controls can be considered proven with the extensive stripping and sampling performed. On the other hand, the gravity center of this gold system is still not known. The most obvious guide to follow is the North-East control observed on the ground which correlates well with the magnetic pattern. Its repetition over 700 metres of strike length is a key factor for drill planning.

Gilbert

Only one surface showing is known from the Gilbert area, but it hosts significant and sufficient information to generate additional exploration targets. The gold mineralization is embedded in tremolite schist showing a strong angular relation with a north-east gabbro. Tremolite is preferably developed in ultramafic rocks. Higher grades (channel sample of 40 g/t over 0.7m) are associated with quartz veins showing an undulating shallow plunge. When correlated with the domes and basins magnetic pattern, the potentially gold bearing tremolite schist can correspond to a braided network of lower magnetic signal surrounding high magnetic domes. Each potential structure has a size of approximately 100 metres, following different directions.

Table 2: TECHNICAL PARAMETERS

Phase 1

Target	Number of holes	Spacing	Meterage
West Zone	24	25 metres	4,800 metres
Marbenite South Bound	8	100 metres	1,800 metres
Raven	8	100 metres	3,200 metres
Gilbert	18	100 to 50 metres	3,600 metres
Total	58		13,400 metres

Phase 2

Target	Number of holes	Spacing	Meterage
West Zone	12	100 to 50 metres	2,400 metres
Marbenite South Bound	-	-	-
Raven	16	50 to 25 metres	4,000 metres
Gilbert	-	-	-
Total	28		6,400 metres

1. The major share of this program is represented by the confirmation drilling of the **West Zone**, mainly between section 279 100 E and 279 300 E down to a depth of 300 metres. **4800 metres** in 24 holes could be drilled at a spacing of 25 metres to confirm historical results and start assembling a first resource following 43-101 standards. The maximum depth actually achieved within the framework of this program is 400 metres considering that that below this mark, the down dip extension of the target structure may fall close to the property limit to the north.
2. **The Raven and Gilbert Zones** can be covered with a similar meterage of respectively **3,200 metres** and **3,600 metres** but with two distinctive approaches. Geology and

controls of gold mineralization are relatively well known by historical drilling and stripping. The main key assumption remains the shallow plunge of high grade shoots which can generate laterally elongated lenses with limited vertical extension. This type of control requires to be tested at different elevations. The first phase proposal uses 8 holes at 100 metres spacing planned to be drilled from surface down to 300 metres depth. The situation at Gilbert with a restricted window of information is different. 18 shallow holes are planned where a magnetic signature similar to the discovery outcrop is observed.

3. **The Marbenite South Bound** can offer different possibilities of follow up along 1.2 kilometres of strike length where historical holes hit one or more drilling intervals bearing gold. 3 sections of 1 to 3 holes totalling **1,800 metres** can first be used to validate the consistency of the gold signal across the Jacola – Val d'Or Formations.

4. West Zone objective for phase 2 is to connect known mineralization with potential extensions. Isolated results from scattered historical holes already give indications of potential extensions. The window of investigation goes westward from section 279100E to 278800E, and eastward from section 279300E to 279600E, down to a depth of approximately 600 metres. 12 holes (**2400 metres**) spaced out from 100 metres to 50 metres can first be used to located the target structure down to a depth of 300 to 500 metres.

5. Dependant on what is discovered around the **Raven Zone**, infill drilling using 25 to 50 metres spacing can be used to delineate mineralized zones. The model uses 4 additional holes for each successful hole of phase 1, extrapolating that 1 in 2 holes will hit the target. 16 holes for a total of **4,000 metres** could thus be drilled.

APPENDIX: Exploration Targets Outline On Magnetic Anomaly





