# A SUMMARY OF THE AVOCADO GOLD DEPOSIT

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### INTRODUCTION

Building on the author's experience with the discovery of the Pipeline gold deposit in the Cortez Trend, it is concluded that alluvial covered pediments are good exploration targets. Additionally, some portion of a typical Carlin-type gold deposit (CTGD) is sulfide rich, commonly pyrite, and contains significant amounts of carbonaceous (organic rich) material. Both of these components should give reasonable Induced Polarization (IP) geophysical responses. A significant portion of the Red Hill property north of the range front is an alluvial covered pediment, and likely an excellent location to explore for CTGDs (Figure 1). In December 2011, a three line IP survey was conducted by Zonge International, Inc. in this area, resulting in the discovery of what has become known as the Avocado anomaly. Figure 2 outlines the extent of the anomaly with the intense central portion, which has a shape similar to the cross section of an avocado, thus the name.

The first hole to test the anomaly was drilled in 2014 (AV-01) and confirmed that the IP response was the result of fine-grained disseminated pyrite hosted in black carbonaceous Devonian carbonates, which is a typical CTGD geological environment. Although the hole only contained weakly anomalous gold there was a good CTGD trace element suite. This supported the original interpretation that a significant gold system was likely associated with the Avocado anomaly. Drilling in 2016 (AV-02 and AV-04C) confirmed the presence of significant gold mineralization associated with the anomaly, and a hole to the east (AV-03) encountered gold in a somewhat different geological environment (Figure 3). These two areas are referred to as Avocado West and Avocado East, respectively.

This document summarizes the current geological understanding of the Avocado area, and outlines the next exploration program to continue defining the size and grade of this gold system, or systems.

### **GEOLOGY**

NuLegacy's 2016 drilling confirms that at least one CTGD exists in the Avocado area, which is approximately two kilometers north-northwest of the Iceberg gold deposit North zone. Drilling has identified the same stratigraphic units at Avocado as those that host gold mineralization in the Iceberg deposit, and the other gold deposits in the Cortez Trend. At Avocado West there is about 140 meters of alluvium below which is a sequence of bimodal volcanics with overly interbedded sediments and tuffs of probable Tertiary age. Below these units is the upper most of the Devonian sequence, Horse Canyon Formation and the underlying Wenban Limestone, both of which are important gold hosts in the Cortez

district, and contain gold in the Avocado drill holes. A few Tertiary(?) intrusive dikes are also present. There is likely a fault between AV-02/04C and AV-03 with the Avocado East area up thrown relative to Avocado West. AV-03 drilled through alluvium into what is likely a thin interval of Wenban 8 and then into Wenban 5. Since the entire area is covered by alluvium it is impossible to determine at this time where the fault may occur, or if there might be multiple faults that uplift the eastern block.

# MINERALIZATION/ALTERATION

Drill hole AV-02 contains an interval of consistent gold mineralization from 414.6 to 614.3 meters that averages 0.26 g/t Au, and straddles the contact zone between Horse Canyon and Wenban formations. Mineralization is associated with sporadic silicification, bleaching, carbonaceous material, decalcification, and minor disseminated and veinlet pyrite. Within this 199.7 meter interval are two >1.0 gram gold intervals. The upper zone from 422.9 to 432.9 meters averages 1.01 g/t Au and is associated with moderate to strong silicification, and up to 30% disseminated and veinlet pyrite. This interval is hosted by lower Horse Canyon Formation, just above the Wenban contact. The lower interval from 591.5 to 605.2 meters averages 1.03 g/t Au and is associated with a jasperoid breccia with up to 10% disseminated and veinlet pyrite. This interval is within middle Wenban (unit 5). Both of these higher grade intervals are partly oxidized.

Hole AV-03 contains a 25.9 meter interval that averages 1.04 g/t Au, and not the longer interval of lower grade gold that is present in AV-02. From 312.6 to 347.5 meters the >1.0 gram mineralization is associated with jasperoid breccia with up to 5% disseminated pyrite, and is partly oxidized. Mineralization is hosted in middle Wenban (unit 5). The apparent differences between AV-02 and AV-03 are the lack of carbonaceous material in AV-3, and that the gold is restricted to the jasperoid. AV-03 mineralization is somewhat similar to Iceberg mineralization, and AV-02 more typical of the deeper parts of a typical CTGD.

Although drilled in close proximity to AV-02 the core hole (AV-04C) encountered somewhat different geology. The hole encountered the Horse Canyon-Wenban contact zone and a jasperoid breccia similar to the upper interval in AV-02. Below the mineralized interval the hole encounter a fault zone the footwall of which is lower Wenban (unit 4), which is not a favorable host to gold mineralization. The mineralized interval from 403.4 to 441.8 meters averages 0.56 g/t Au and has a higher grade interval from 424.9 to 437.1 meters that averages 1.54 g/t Au. The higher grade zone is associated with moderately to strongly silicified breccia with up to 5% disseminated pyrite, and is weakly oxidized.

# **GEOCHEMISTRY**

A historic soil survey over Avocado indicated anomalous gold in the AV-02 area. To confirm this anomaly NuLegacy conducted a new soil survey. Analytical results supported the historic data for gold, and revealed that CTGD trace elements are anomalous and associated with the gold anomaly (Figure 4). The southeastern margin of the soil anomaly is closely associated with AV-02 and extends to the northwest into an undrilled area. There is another somewhat separated anomaly to the southeast of AV-02 which is also undrilled. To the northeast a previously unknown soil anomaly was detected and is also undrilled.

Multielement analyses were performed on 25 foot composites for holes AV-02 and AV-03. A CTGD suite of trace elements, (As, Sb, Hg, and Th), are strongly anomalous and associated with the gold intervals in AV-02 supporting the conclusion that Avocado West is the margin of a typical CTGD. The trace element signature from hole AV-03 is less clear and supports the conclusion that it is somewhat different than the mineralization in AV-02.

## **GEOPHYSICS**

The Avocado anomaly was initially identified as a result of the pediment IP survey. Drilling into the central part of the anomaly validates the initial interpretation that the electrical response was from pyritic-carbonaceous carbonates that is a likely target for gold mineralization. Historic CSAMT and gravity surveyed give indications of the structural setting for the Avocado area. The principal structural element is an east-west fault zone that may be part of the range front structure and seems to have up-faulted a block to the north. This fault has the appearance of displacing the favorable geological and geochemical features. The data also supports the interpretations that there are a series of northerly trending fault zones that systematically down-drop blocks to the west in a stair step manner. This has the effect of placing the more favorable host rocks to the west.

### CONCLUSIONS AND EXPLORATION APPROACH

Drilling has confirmed that there may be a CTDG on the pediment north of Iceberg, and possibility two gold systems. The sum of all data collected to date indicates that mineralization identified in AV-02 and AV04 (core) is open to the north and northwest, into an area of no historic drilling. The initial 2017 program will be to drill at least three reverse circulation holes as step outs to the northwest and north. Two additional holes are planned to the west and north of AV-03 to continue the expansion of this mineralized area. Once the results of this initial 2017 drilling are available and understood, additional drilling will be planned as warranted.



Figure 1- Drilling at the Avocado with the Goldrush deposit in the background.

# The Avocado Anomaly: Plan View \*\*Nulsgacy Gull Corporation 54 Hole AV-04C Section Anomaly Hole AV-02 Hole AV-01 Shoe AV-03 Historical holes NyLegacy Holes

Figure 2- Outline of the Avocado IP anomaly and location of drill holes

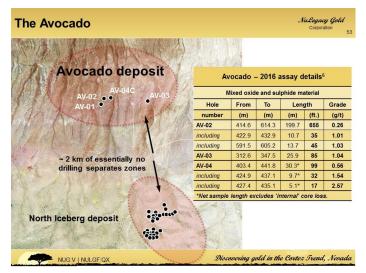


Figure 3- Relationship between Iceberg North zone and the Avocado deposit

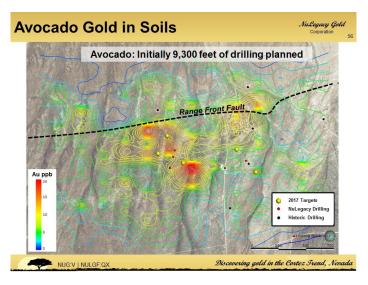


Figure 4- Untested gold anomalies in the Avocado area