



# **2023 YMEP SUMMARY REPORT**

**PLACER MODULE**

**YMEP #23-010**

## **GOLDEN GATE CREEK EXPLORATION PROJECT**

**JUNE 15 – JUNE 25, 2023**

Claims:

Gate 1 (P 10292) – Gate 21 (P 10312)

63° 26' 19.82" N, 139° 7' 2.19" W

NTS Map Sheet: 115006

**PREPARED FOR:**

**JASON KOSSLER, PRESIDENT**

**NBC CONTRACTING LTD.**

January 2024

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## 1 INTRODUCTION

DC Environmental Solutions ('DCES') was retained by NBC Contracting Ltd. ('NBC') to prepare the summary report for the 2023 YMEP (#23-010) program on Golden Gate Creek, completed by NBC and Northern Sonic Drilling and Consulting Inc. (NSDC) in 2023 under the YMEP Placer Module.

This report has been prepared by DCES in accordance with the requirements of YMEP Transfer Payment Agreement #23-010 between Government of Yukon and NBC. This report outlines the results of the sonic exploration drilling work performed during the summer of 2023, and includes the following information:

- General description of the project site and associated placer claim information.
- List of applicable permits, licences, and authorizations in place during the 2023 YMEP project activities.
- Summary of regional, local and surficial geology of the project area.
- History of previous mining and exploration investigations in the project area.
- Summary of the 2023 YMEP project activities.
- Summary of results and findings from the 2023 YMEP project.
- Summary of the 2023 YMEP project expenditures.
- Recommendations.

Relevant tables, figures, and maps have been included in this document to further supplement the information presented herein.

### 1.1 PROJECT PURPOSE

The purpose of the 2023 YMEP program conducted by NBC was to explore Golden Gate Creek, a right limit tributary of Henderson Creek, for undiscovered placer gold deposits. Henderson Creek is a tributary of the Stewart River and located within the Dawson Mining District. Placer deposits in the Stewart River-Yukon River drainage have been mined for nearly 100 years. Gold was first discovered in the Henderson Creek drainage in 1897 (Lowey, 2004).

Placer operations and gold production have been conducted on Henderson Creek and its tributaries since the late 1800's through hand workings, dredging and modern mining techniques. An extensive drilling program was conducted by the Yukon Consolidated Gold Corporation (YCGC) on Henderson Creek in the 1940's to support YCGC dredging operations (YG, 2023a). YCGC drilling results demonstrated elevated placer gold concentrations in the Henderson Creek drainage directly downstream of the Golden Gate Creek confluence, and generally decreasing gold concentrations further up the Henderson Creek drainage above the confluence. YCGC dredging operations extended up the Henderson Creek valley to just below the confluence with Golden Gate Creek.

Elevated gold values identified in the Henderson Creek drainage during the YCGC drill program suggests that Golden Gate Creek may have been a contributing source of gold to the Henderson Creek placer deposit. Geochemical and geophysical testing has been previously conducted in the general area of the 2023 YMEP project location by JP Ross for hard rock mining targets, which also highlighted the potential for economical placer deposits in the Golden Gate Creek drainage.

## 2 PROJECT SITE DESCRIPTION

### 2.1 PROJECT LOCATION

Golden Gate Creek ('Project Site') is located within the Dawson Mining District, and also within the Goldfields Land Management Unit (LMU #11) of the Draft Dawson Regional Land Use Plan and the Yukon River North watershed.

The Project Site is situated approximately 130 km south of Dawson City and accessed from existing Goldfield roads that extend southwest from the Hunker Granville-Sulphur-Loop Road (Route #312) and over the Eurkea Dome and Henderson Dome. The Project Site is located on Golden Gate Creek, approximately 13 km upstream of the confluence of Henderson Creek and North Henderson Creek as presented in Figure 1.

The coordinates for the centroid of the Project Site and the associated NTS map sheet are provided below:

Project Coordinates:

Centroid Latitude: 63° 26' 19.82" N      Centroid Longitude: 139° 7' 2.19" W  
NTS Map Sheet: 115006

The Project Site is bordered by staked placer claims to the east and west on adjacent unnamed right limit tributaries of Henderson Creek. Henderson Creek also includes staked placer claims throughout the entire drainage area and along various other left and right limit tributaries. Right limit tributaries located directly west and northwest of the Project Site are staked by Wildwood Exploration Ltd. and are all currently permitted for Class 1 exploration activities.

The Project Site, as well as claims directly upstream and downstream on Henderson Creek are included in Water Licence and Class 4 Placer Mining Land Use Approval PM15-097/AP15097 registered to H.C. Mining Ltd. The Project Site includes existing road access from the Henderson Creek valley and some trails in the Golden Gate Creek drainage which were used to support the 2023 exploration activities.

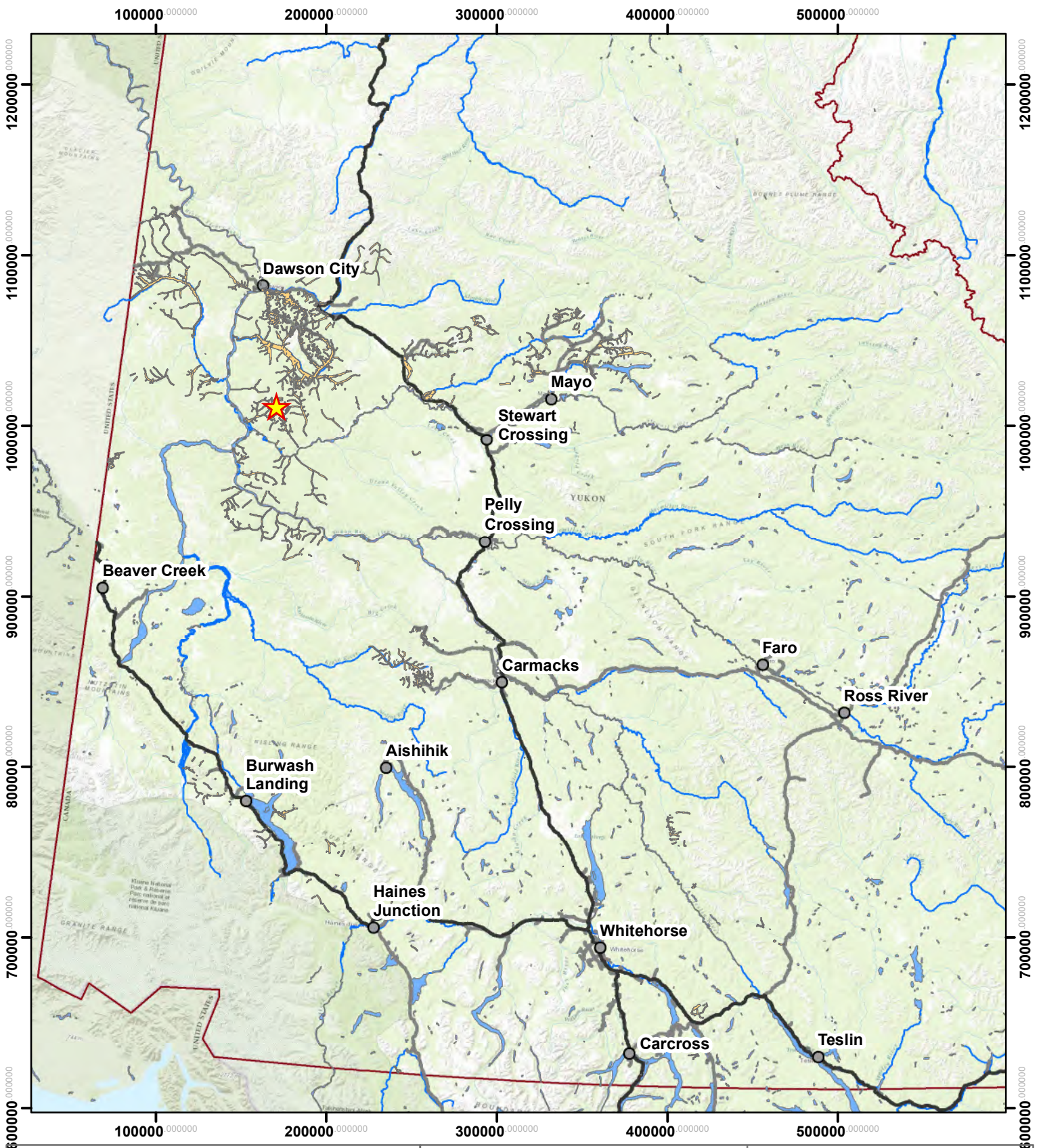
### 2.2 FIRST NATION TRADITIONAL TERRITORY




The Project Site is located within the Traditional Territory of the Tr'ondëk Hwëch'in First Nation. The closest parcel of First Nation Settlement Land is TH S-15B1, located approximately 23 km downstream of the Project Site, along the Stewart River near the confluence with Henderson Creek.

The 2023 YMEP Project location, and proximity to First Nation Settlement Land and surrounding placer claims are presented in Figure 2

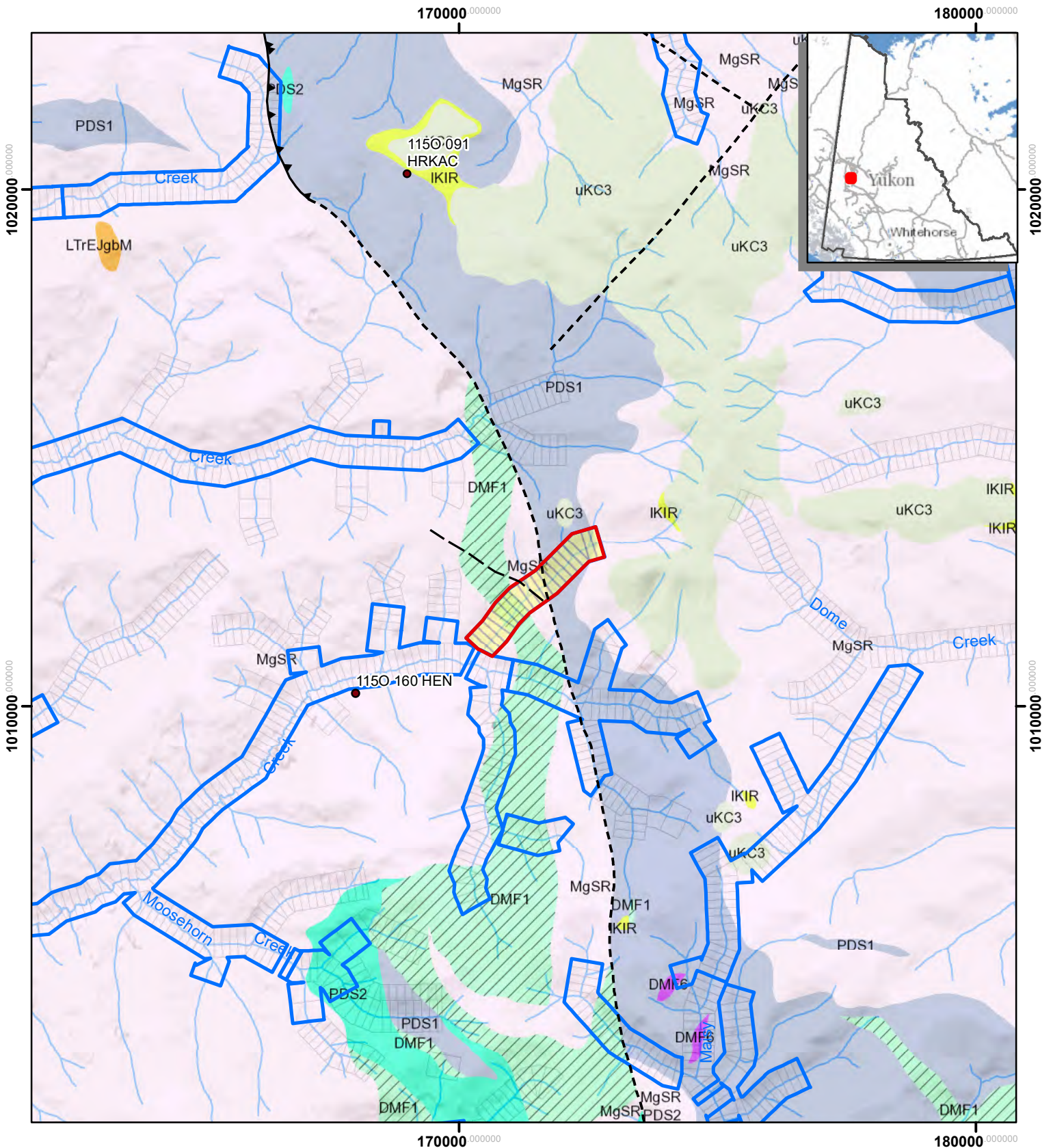
### 2.3 2023 YMEP PROJECT CLAIM INFORMATION

The placer claims located on the Project Site are registered to HC Mining Ltd. and consists of 21 contiguous placer claims which are listed in Table 1 below. NBC and HC Mining Ltd. have entered into an agreement which will allow NBC to conduct exploration activities on the existing claims under the current water licence and Class 4 MLUA. A claim status report for the 21 claims is included in Appendix A of this application.



<p><b>Legend</b></p>  2023 YMEP Project Location	<p style="text-align: center;">N</p>  <p style="text-align: center;">0 25 50 100 150</p>  <p style="text-align: center;">Kilometers</p> <p>Map Scale: 1:3,000,000 (printed on 8" x 11")          Map Projection: NAD 1983 Yukon Albers</p> <p>Map information has been generated by DCES from ESRI, CanVec, NHN, and Government of Yukon sources. Information may contain errors from data sources.</p>	<p><b>Title:</b>          YMEP Project Location - UNRLT of Henderson Creek</p> <p><b>Proponent:</b>          NBC Contracting</p> <table border="1" style="width: 100%;"> <tr> <td><b>Drawn by:</b> DC</td> <td><b>Date:</b> 2023-12-28</td> <td><b>Figure:</b> 1</td> </tr> </table>	<b>Drawn by:</b> DC	<b>Date:</b> 2023-12-28	<b>Figure:</b> 1
<b>Drawn by:</b> DC	<b>Date:</b> 2023-12-28	<b>Figure:</b> 1			







**Legend**

- 2023 NBC YMEP Claims
- Surrounding Placer Claims
- Mineral Occurance
- First Nation Settlement Land
- Placer Land Use Permit

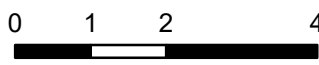
**Faults**

- normal
- strike slip
- thrust
- unknown





N



0 1 2 4  
Kilometers

Map Scale: 1:100,000 (printed on 8" x 11")  
 Map Projection: NAD 1983 Yukon Albers

Map information has been generated by DCES from ESRI, CanVec, NHN, and Government of Yukon sources. Information may contain errors from data sources.

**Title:**  
YMEP Project Location and Surrounding Bedrock Geology

**Proponent:**  
NBC Contracting

<b>Drawn by:</b> DC	<b>Date:</b> 2023-12-28	<b>Figure:</b> 2
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Table 1. List of Claims included in the 2023 YMEP Application

Claim Name	Claim Number	Claim Registration
Gate 1	P 10292	H.C. Mining Ltd. - 100%
Gate 2	P 10293	H.C. Mining Ltd. - 100%
Gate 3	P 10294	H.C. Mining Ltd. - 100%
Gate 4	P 10295	H.C. Mining Ltd. - 100%
Gate 5	P 10296	H.C. Mining Ltd. - 100%
Gate 6	P 10297	H.C. Mining Ltd. - 100%
Gate 7	P 10298	H.C. Mining Ltd. - 100%
Gate 8	P 10299	H.C. Mining Ltd. - 100%
Gate 9	P 10300	H.C. Mining Ltd. - 100%
Gate 10	P 10301	H.C. Mining Ltd. - 100%
Gate 11	P 10302	H.C. Mining Ltd. - 100%
Gate 12	P 10303	H.C. Mining Ltd. - 100%
Gate 13	P 10304	H.C. Mining Ltd. - 100%
Gate 14	P 10305	H.C. Mining Ltd. - 100%
Gate 15	P 10306	H.C. Mining Ltd. - 100%
Gate 16	P 10307	H.C. Mining Ltd. - 100%
Gate 17	P 10308	H.C. Mining Ltd. - 100%
Gate 18	P 10309	H.C. Mining Ltd. - 100%
Gate 19	P 10310	H.C. Mining Ltd. - 100%
Gate 20	P 10311	H.C. Mining Ltd. - 100%
Gate 21	P 10312	H.C. Mining Ltd. - 100%

#### 2.4 PLACER STREAM CLASSIFICATION AND WATERSHED

The Project Site is located within the area covered by Yukon River North Watershed – Fisheries and Oceans Canada (DFO) Placer Mining Authorization. The DFO Placer Stream Habitat Classification for Golden Gate Creek is the same over all the identified claims. A summary of the DFO operational and restoration habitat classification standards for the claims on Golden Gate Creek is presented in Table 2 below.

Table 2. DFO Operational / Restoration Stream Habitat Classification Standards on the Project Site

Claims	Operational Standard	Habitat Suitability / Restorations Standard
P 10292 - P 10312	Low	Low

All exploration activities were completed in accordance with the Operation and Restoration Standards in Table 2. A deposit of waste to Golden Gate Creek is authorized during exploration activities included in the proposed YMEP project under the current water licence and Class 4 Mining Land Use Permit (MLUA) that covers the 21 claims.

### 3 PERMITS, LICENCES, AUTHORIZATIONS, NOTIFICATIONS AND AGREEMENTS

The following permits, licences, authorizations, notifications, and agreements identified in Table 3 were in place during exploration activities which allowed the 2023 YMEP project to proceed.

Table 3. List of Applicable Permits, Licences, Authorizations, Notifications and Agreements

YG Department, Branch or Company	Legislation	Approval/Authorization/Licence/Permit/Agreement
<b>Federal Government Agency</b>		
Yukon Environmental and Socio-economic Assessment Board (YESAB)	Yukon Environmental and Socio-economic Assessment Act and Regulations	YESAB Decision Document 2015-0207
Fisheries and Oceans Canada (DFO)	<i>Fisheries Act</i> and Regulations	Yukon River North Watershed Placer Mining Authorization (08-HPAC-PA5-00051-2)
<b>Territorial Agency</b>		
YG Executive Council Office, Yukon Water Board	<i>Yukon Waters Act</i> and Regulations (Schedule 6 – Placer Mining Undertaking)	H.C. Mining Limited Type B Water Licence PM15-097
YG Energy, Mines and Resources (EMR), Minerals Branch	<i>Placer Mining Act</i> and Regulations	H.C. Mining Limited Class 4 Placer Mining Land Use Approval for Operating Plan AP15097
<b>Private Agreements</b>		
NBC Contracting Ltd.	H.C. Mining Limited	Agreement to perform exploration activities on 21 placer claims on Golden Gate Creek
NBC Contracting Ltd.	H.C. Mining Limited	Agreement to support exploration work through use of camp and direct water use under PM15-097/AP15097

## 4 BIOPHYSICAL PROPERTIES AND CLIMATE

The Project Site is located within the Klondike Plateau Ecoregion, which is part of the Boreal Cordillera Ecozone. The Boreal Cordillera Ecozone covers sections of northern British Columbia and Southern Yukon, and is an extension of the boreal forest zone that stretches across the continent (Smith et al., 2004).

The Klondike Plateau Ecoregion is part of the eastern most Beringia, and has been exposed to long periods of weathering which has resulted in extensive upland boulder fields, V-shaped valleys and deep soil weathering.

The climate of the Klondike Plateau Ecoregion is strongly continental with warm summers and very cold winters. Mean annual temperatures within the ecoregion are near -5 °C, which also show a strong seasonal variation. Mean January temperatures typically range between -23 °C to -32 °C, while mean July temperatures range from 10°C to 15°C. Extreme temperatures in the lower valleys can range from -60 °C to 35 °C over the course of a year (Smith et al., 2004).

Precipitation within the ecoregion typically ranges from 300 mm to 500 mm annually. Stream flow is typically characterized by a rapid increase in stream flow discharge in May and peaking in June due to snowmelt. However, summer rains can produce secondary flow peaks and sometimes the annual maximum, especially from mountainous regions (Smith et al., 2004).

The Klondike Plateau Ecoregion is in a zone of widespread discontinuous permafrost, with permafrost generally present on north and east facing slopes and thicker packages of stream beds (Mitchell et al., 2014).

## 5 GEOLOGICAL CONDITIONS

### 5.1 REGIONAL GEOLOGY

The bedrock geology of the Klondike Plateau Ecoregion constitutes a large part of the Yukon-Tanana (YT) Terrane which extends from Alaska to the Southern Yukon and British Columbia. The Project Site is located within the Yukon – Tanna Terrane. The YT-Terrane is a composite of medium to high-grade, poly-deformed Paleozoic metasedimentary rock (i.e., Klondike Assemblage and Nasina Assemblage) and meta-igneous rocks (Lowey, 2006). The metasedimentary rocks are intruded and overlapped by granitic and volcanic rocks, overlain by fault-bound slices of serpentized ultramafic rock of the Slide Mountain Terrane (Smith et al., 2004, Lowey, 2006).

The Klondike Assemblage and Nasina Assemblage consist mainly of quartz–chlorite schist, quartz–muscovite schist, micaceous quartzite, graphitic quartzite, quartz–feldspar–augen schist, amphibolite and orthogneiss, and the Slide Mountain Terrane consists mostly of greenstone and serpentinite (Mortensen et al., 2016).

Rock units in the Klondike District, extending from the Dawson area to Pelly Crossing, YT have generally recorded five separate deformation events identified as D1 – D5 (Mackenzie et al., 2008a). Strong ductile deformation of middle green schist to locally lower amphibolite facies occurred during the D1 and D2 events in the late Permian period (Mortensen et al., 2016). The D3 event included thrust imbrication, emplacement of greenstone and serpentinite bodies of the Slide Mountain assemblage, folding of the

dominant schistosity and development of a spaced cleavage. The vast majority of quartz formation occurred as early segregation veins (containing neither gold or sulphides) that are parallel to the compositional layering in the schistose lithologies, and are interpreted to have formed during the ductile deformation associated with the D1/D2 and D3 events (MacKenzie et al., 2008a).

The D4 event produced localized, mainly north- and northwest-trending zones of kink folds and high-angle reverse faults. Mesothermal gold vein formation is interpreted to have formed late in, or immediately following the D4 event in the later Jurassic period. These gold veins were localized into post-metamorphic compressional structures in the Klondike Schist after the rocks were uplifted through the brittle-ductile transition of the D1 – D3 events, and before extensional normal faulting of the D5 event (MacKenzie et al., 2007, MacKenzie et al., 2008a).

Mesothermal gold veins formed individual veins up to 3 m in width as well as swarms of veins at various orientations, but typically with an overall north or northwest trend consistent with the D4 deformation. Rock units of the Klondike Assemblage that host gold-bearing veins in the northwestern Klondike District are mainly comprised of felsic metavolcanic rocks (variably pyritic quartz-muscovite schist), as well as metaporphry (quartz ± feldspar augen schist) and metaplutonic rocks. The D5 deformation event is characterized by extensional normal faulting with abundant gouge development which locally overprint and offset the gold bearing quartz veins of the D4 deformation event, which occurred as part of the Cretaceous extension (Mortensen et al., 2016).

The Klondike Plateau Ecoregion is largely unglaciated during the last 3 million years, except for local glaciers that emanated from the headwaters of the Sixty Mile River valley, local peaks in the eastern Dawson range, and the Kluane ranges into the Wellesley basin. Surface deposits over much of the ecoregion are composed of colluvium, with alluvium and glacial outwash terraces (Smith et al., 2004). The unglaciated period had a profound impact on the ecoregion, which allowed for the evolution and preservation of a well-developed landscape with rounded summits and valley systems and their contained placer deposits (Mitchel et al., 2014).

## 5.2 LOCAL GEOLOGY

Within the Henderson Creek drainage, rocks exposed along the valley consist mainly of granite gneisses and other igneous schists. At the forks located 3 miles (5 km) above the confluence of Henderson Creek and the Stewart River, inliers of white crystalline limestone associated with quartz mica schists and quartzite have been identified (Labarge, 2007). The area covered by the Gate claims on Golden Gate Creek includes three different mapped bedrock geology units described in further detail below, starting from the mouth of Golden Gate Creek and moving up the drainage (Figure 2):

- MgSR - covers the majority of the Henderson Creek drainage and portions of the the Golden Gate Creek drainage, including the Gate 1 – Gate 5, and Gate 9 to Gate 13 claims. This bedrock geology unit is part of the Yukon – Tanana Terrane, Simpson Range Assemblage and is described as consisting of hornblend-bearing metagranodiorite, metadiorite and metaonolite.
- DMF1 – a localized bedrock geology unit covering the Gate 5 – Gate 8 claims and within the surrounding MgSR unit. This bedrock geology unit is part of the Yukon – Tanana Terrane, Finlayson Assemblage and is described as consisting of intermediate to mafic volcanic and volcanoclastic rocks (Government of Yukon, 2023b).

- PDS1 – covers the upper reach of Golden Gate Creek from Gate 12 to Gate 21. This bedrock geology unit is part of the Yukon – Tanana Terrane, Snowcap Assemblage and is described as consisting of quartzite, psammite, pelite and marble; minor greenstone and amphibolite (Government of Yukon, 2023b).

There are two identified fault lines that bisect the Project Site including a north-south trending fault of unknown type that parallels the western edge of the PDS1 unit and separates the PDS1 unit from the larger MgSR unit in the area near Gate 12 – Gate 14 claims. The second fault includes a shorter northwest - southeast trending slip fault that bisects the Project Site around Gate 10 and Gate 11 and also bisect the south facing slope of the Golden Gate Creek drainage above the Gate 5 – Gate 9 (Government of Yukon, 2023c).

### **5.3 SURFICIAL GEOLOGY**

The surficial geology of Henderson Creek right limit exposure located approximately 2 km downstream of the confluence of Henderson Creek and Golden Gate Creek consists of 1.3 ft of clast supported cobble gravel with sub-rounded clasts and 35% medium-sand and silty matrix. Between 1.3 ft to 19.7 ft is loess with minimal organics (Van Loon & Bond, 2014; Van Loon & Bond, 2018). The bedrock surface is undulating through the area and gravel depths vary from 1.3 ft to 3.3 ft.

Limited knowledge of the surficial geology of Golden Gate Creek was identified in the available information researched from the Yukon Geological Survey; however, it was noted in the Yukon Placer Database records that the Golden Gate Creek / Henderson Creek confluence included 5 feet of muck and gravel mix overlying an additional 4 feet of gravel (Labarge, 2007).

## **6 SUMMARY OF PREVIOUS WORKS**

The following section highlights the available history of exploration and mining activities within and in proximity of the Project Site, which were used to help identify the 2023 YMEP project target.

### **6.1 EARLY MINING AND EXPLORATION**

Extensive hand mining was completed by early miners on Henderson Creek. Gold had been discovered on Henderson Creek by 1897 and hand mined in the early years after discovery. Yukon Gold Placers Lt. mined on Henderson Creek from 1946 to 1956 using a diesel operated pontoon dredge capable of handling up to 3,000 cubic yards in 24 hrs. In 1947, the property on Henderson Creek consisted of 144 claims situated mainly on the left fork of the creek, owned by the Yukon Consolidated Gold Corporation Limited (YCGC), and was operated by the Yukon Gold Placers Limited under an agreement with the owners (Labarge, 2007). An extensive drilling program was conducted by the Yukon Consolidated Gold Corporation (YCGC) on Henderson Creek in the 1940's to support dredging operations (Government of Yukon, 2023a). The drill program extended approximately 2 km upstream beyond the confluence of Golden Gate Creek and Henderson Creek (Figure 3).

*Figure 3 Historic YCGC Drill Hole Gold Values*

Elevated gold values were identified during the YCGC drilling downstream of the confluence, suggesting that Golden Gate Creek may have contributed as a source to the Henderson Creek placer deposit. Figure 3 presents the gold value results from the historic YCGC drill program on Henderson Creek, in proximity to the YMEP project location on Golden Gate Creek.

By 1956, the dredge had recovered nearly 35,000 crude ounces of gold on Henderson Creek. Recovery grades were reported in the range of 0.015 to 0.019 fine ounces per cubic yard. Tailings from 1949 to 1956 dredging operations are still present along the middle of Henderson Creek. Alluvial deposits line the Henderson Creek valley near Golden Gate Creek and a conspicuous alluvial terrace runs along the left limit from just downstream of Moosehorn Creek to the mouth of Henderson Creek (Lebargé, 2007).

## **6.2 MODERN MINING**

Modern mining operations using heavy machinery, sluice plants and other equipment started on Henderson Creek in the 1960's, and continues today. Access to Henderson Creek and Black Hills Creek from Eureka Creek was constructed in 1974 which provides direct access from Dawson City and the North Klondike Highway through the Goldfield roads (Lowey, 2004).

The records from the placer database (Lebargé, 2007) identifies Territorial Gold Placers Ltd was mining near the mouth of Golden Gate Creek on Henderson Creek in 1976. The company processed 7 cuts totalling 53,000 cubic yards of gravel from an area 200 to 250 feet wide by 1,200 feet long. They recovered 2,216 ounces of crude gold. The database also identifies that in 1996/1997, Newcan Placers Ltd. mined a cut on Golden Gate Creek approximately 300 ft long by 200 ft wide (Lebargé, 2007); however, no details were provided as to where on the creek the cut was located.

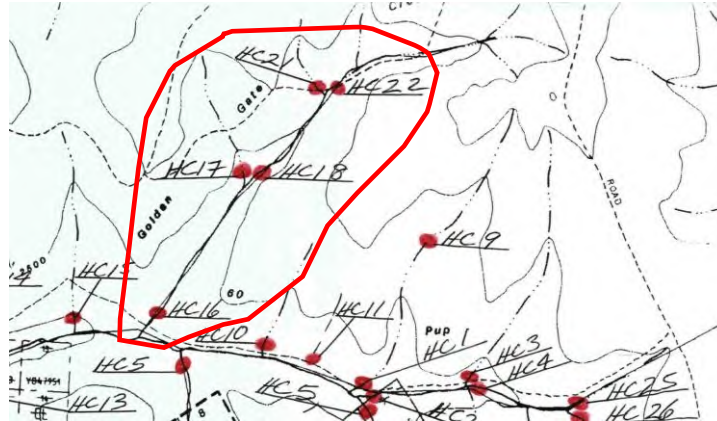
There are currently three permitted placer mining operations on Henderson Creek and its tributaries which are located upstream of the confluence of Henderson Creek and North Henderson Creek. These operations include H.C. Mining Limited (Henderson Creek, Moosehorn Creek and several unnamed tributaries), Northern Gold Resources (Henderson Creek and Russian Gulch), and Vincent Michael (Moosehorn Creek), as well as several Class 1 Notification submissions by Wildwood Exploration Ltd. on tributaries to Henderson Creek (Government of Yukon, 2023c).

## **6.3 MODERN EXPLORATION IN THE GOLDEN GATE CREEK AREA**

Several geophysical, geochemical, trenching and drilling studies have been conducted within the local area of the proposed 2023 YMEP Project on Golden Gate Creek, and are summarized in the sections below.

### **6.3.1 1999 JOHN PETER ROSS – SUMMARY OF WORK, HENDERSON CREEK AREA, YT**

In 1999, J.P. Ross collected a series of float and bedrock samples at 46 sites within the NINA 1 – 74 hard rock claims located in the upper reaches of the Henderson Creek drainage, including additional samples on Golden Gate Creek (Ross, 1999).



Excerpt from Summary of Work, Henderson Creek Area (Ross, 1999)

The gold values in the float and pan samples collected by JP Ross on Golden Gate Creek are presented in the table below.

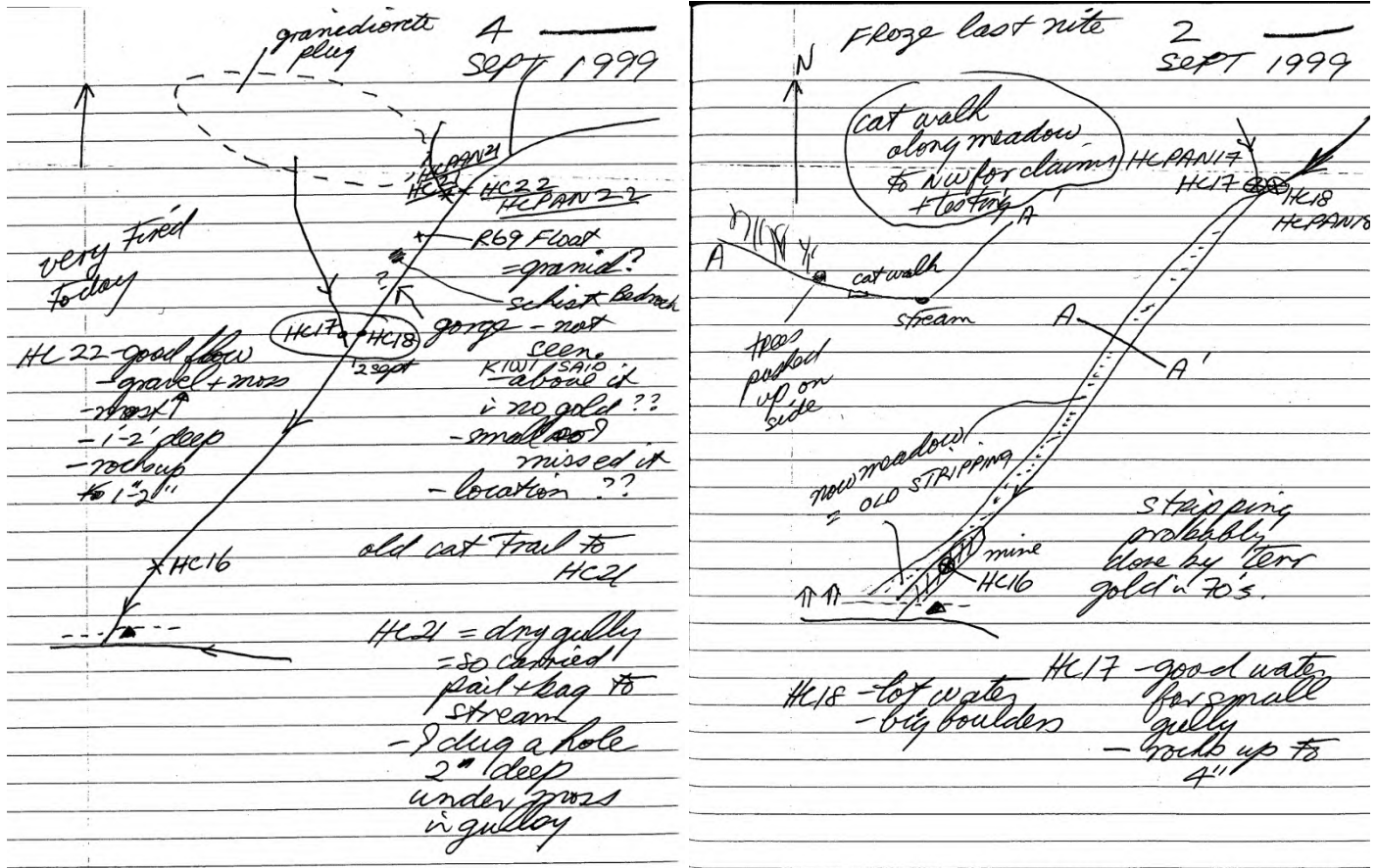
Float and Pan Sample Results from Golden Gate Creek (Ross, 1999)

**A) GOLDEN GATE CREEK**

Sample #	Au ppb -200 mesh	Au ppb -80+200	Au ppb pan con.
HC16	54	643	873
HC17	129	30	8
HC18	55	8	454
HC21	14	14	14
HC22	82	10	12

J.P. Ross identified in the report that the Golden Gate Creek was stripped by Territorial Gold Placers in the 1980's but was not mined. Local miners noted to Ross that the creek was quite steep and spotty at the bottom, and that one of the miners lost money there. One miner noted that they had conducted previous auger drilling on Golden Gate Creek and noted a small canyon just above the H18 sample (~Gate 10 – 11). The local miners noted that gold was observed in the auger samples below the canyon but not above.

However, this does not align with Ross's observations recorded during the exploration program. Ross appears to note the presence of schist bedrock in the area of Gate 14 – Gate 15 (right valley limit). Ross also identifies that the gorge noted by the miner above the HC18 sampling location was not observed during his work. Ross provides a sketch in his notes of the area stripped in the early 70's by Territorial Gold and also the area likely mined by Newcan Placers Ltd. on Golden Gate Creek. From the notes it appears that sample HC16 was collected from the area that was previously mined, indicating that the material may have been missed or not mined at all. The notes recorded by Ross on Golden Gate Creek are presented in the excerpts below.

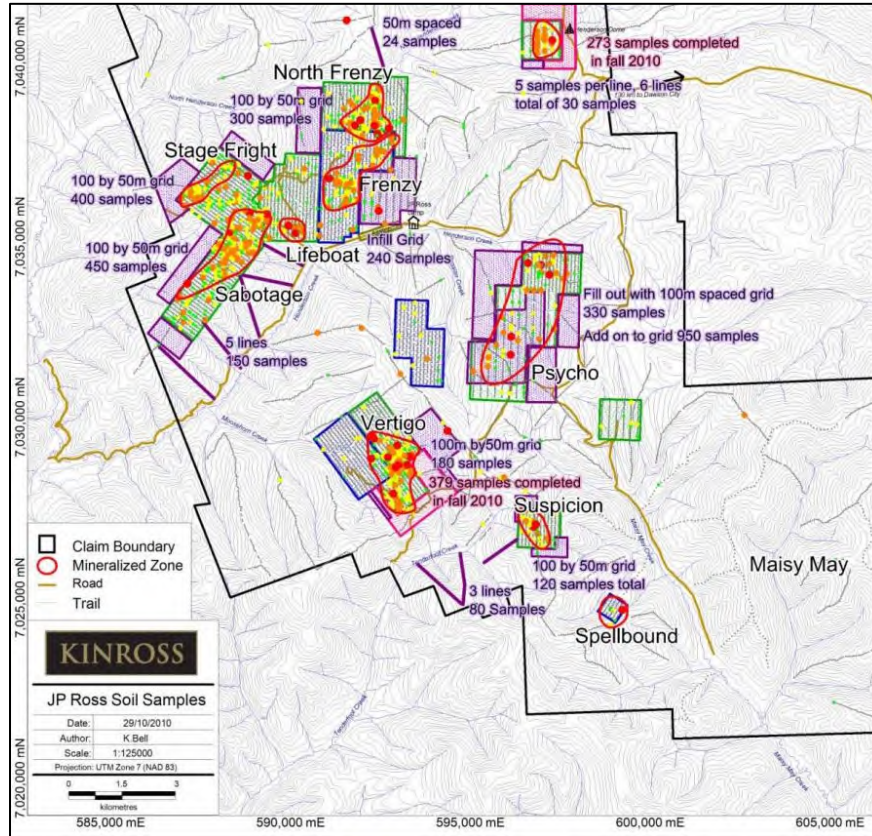


Excerpt from notes by JP Ross during exploration work on Golden Gate Creek

It should be noted that samples HC 17 and HC 18 were collected by Ross in the same area as the identified northwest-southeast trending strike-slip fault. Ross notes in the report that that a 'cucumber-like intrusion and surrounding area is a very good gold target and should be staked...'.

### 6.3.2 2010 GEOLOGICAL AND GEOCHEMICAL REPORT ON THE JP ROSS CLAIM GROUPS (GROUP 1,2,3)

In 2010 field season, total of 13,261 soil samples had been collected on the JP Ross claims. Ten identified mineralized zones (prospects) were looked at more closely in the 2010 study, which included: Frenzy, Sabotage, Vertigo, North Frenzy, Stage Fright, Suspicion, Lifeboat, Rebecca, XMan, and Psycho. The Frenzy and North Frenzy prospect were identified as mineralized zones located near the headwaters of Henderson Creek (Hollis and Bayliss, 2011).



Excerpt of mineralized zones from soil sampling program (Hollis and Bayliss, 2011)

The Frenzy and North Frenzy Prospects are located in proximity to Golden Gate Creek and the proposed 2023 YMEP project. The prospect area known as Frenzy was identified in 2009 by grid soil sampling. The sampling outlined an area anomalous in gold of 1.3 km<sup>2</sup>, with an average Au value of 21 ppb (16 ppb/km<sup>2</sup>) over 263 samples. The 95th percentile is 98 ppb Au and 32 samples are over 40 ppb, with a maximum value of 285 ppb Au. The soil geochemistry indicates a moderate correlation between gold and silver, and a weak correlation with arsenic (Hollis and Bayliss, 2011).

The North Frenzy gold-in-soil anomaly measures 1.1 km<sup>2</sup>, with an average Au value of 29 ppb (25 ppb/km<sup>2</sup>) over 271 samples. The 95th percentile is 83 ppb and 32 samples are over 40 ppb, with a maximum value of 1142 ppb Au. At North Frenzy there is a strong correlation between gold, silver, arsenic, which are all preferentially hosted in the quartzite (Hollis and Bayliss, 2011).

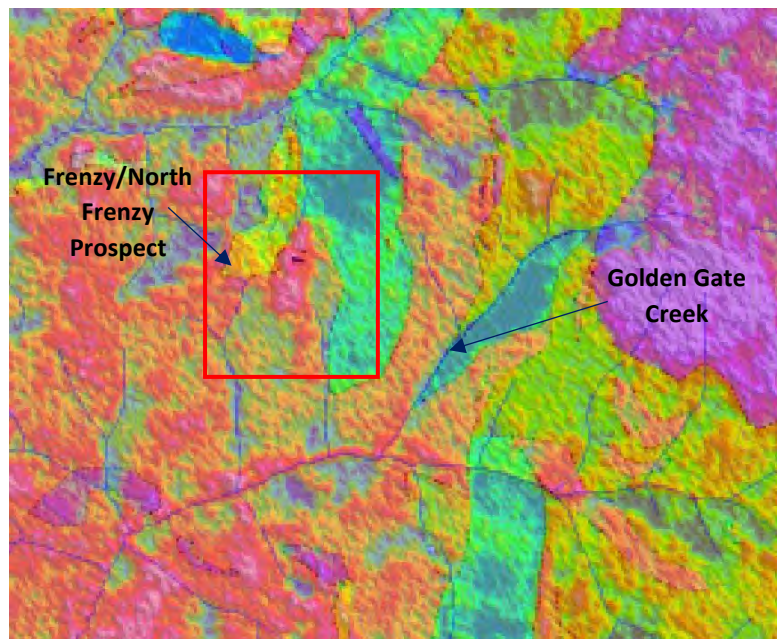
Mineralization at Frenzy appears to be variable and typically confined to small, discrete quartz veins with minor wall rock alteration. North Frenzy has a multi-element geochemical anomaly interpreted from soil sample assay results (Hollis and Bayliss, 2011). At the time of the study, additional soil sampling, drilling and trenching was recommended and also further investigation into the inferred strike slip fault which also bisects the Golden Gate Creek and the proposed 2023 YMEP Program area.

### 6.3.3 2010 HIGH-RESOLUTION AIRBORNE GEOPHYSICAL REPORT ON THE JP ROSS CLAIMS

In 2010, a high sensitivity helicopter magnetic and gamma-ray spectrometric survey was carried out on the JP Ross quartz claims to evaluate bedrock characteristics. High-sensitivity, quantitative gamma-ray spectrometry study was applied to the JP Ross Claim Block to aid in mineral exploration on the property. This method depends upon the fact that absolute and relative concentrations of radioelements K, U and Th vary measurably and significantly with lithology. A total of 8,214 km of survey line was flown over the JP Ross Claims. A Total Magnetic Intensity (TMI) map was one of the main products from the high resolution airborne survey, as well as radiometric maps of potassium, uranium and thorium (Hollis, 2011).

The Radiometric Potassium (K) Map developed as part of the survey identified well-defined potassium highs within the JP Ross claim block. The potassium highs (anomalies) identified from the radiometric survey provided a good tool for potentially imaging felsic intrusive across the claim block area, and also imaging the relatively strong response of the biotite-feldspar-quartz gneiss.

The radiometric potassium map (see excerpt below) depicts elevated readings of potentially felsic intrusive bodies (pink hues) in the previously identified Frenzy and North Frenzy prospect areas above the Golden Gate Creek drainage, and which also correlates well with the areas of anomalous gold-in-soil values identified in the 2010 Geological and Geochemical report within the Frenzy and North Frenzy prospect areas.

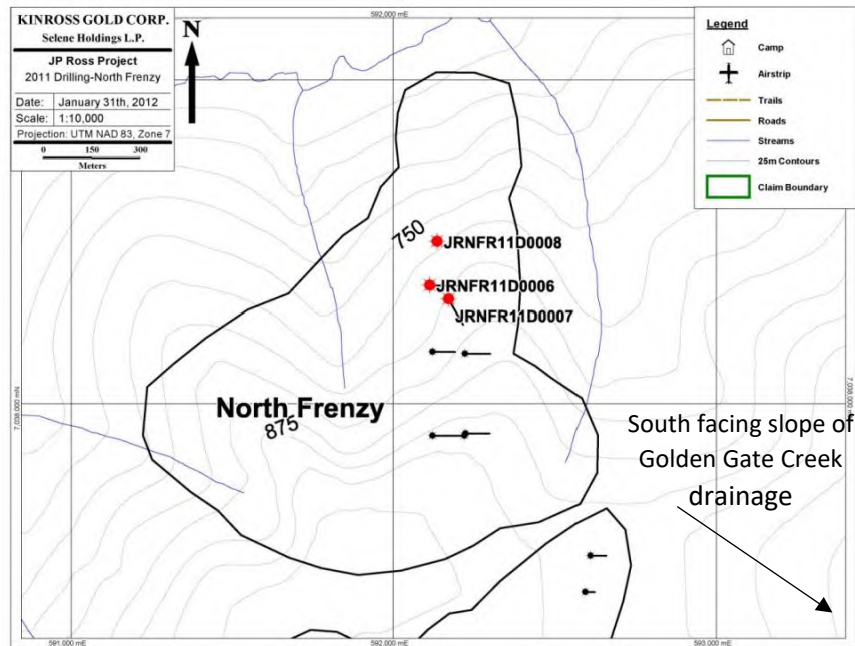


Excerpt of the 2011 Radiometric Potassium (K) Map (Hollis, 2011)

### 6.3.4 2011 DRILLING REPORT – JP ROSS

In 2011, a drill program was conducted on the JP Ross property by Kinross Gold Corporation. During the 2011 drilling program, 3 holes were drilled in the northern region of the North Frenzy prospect. North Frenzy is situated within a large unit mapped as biotite-quartz-feldspar gneiss (BQFG), with north-south

oriented slivers of hornblende gneiss (amphibolite), quartzite and biotite schist. A large fault cuts through the prospect roughly northwest-southeast (see Figure 3 – strike slip fault). These drill holes were planned to target anomalous gold based on anomalous Au in soil, along with anomalous As, Pb, and Ag soil samples collected previously.

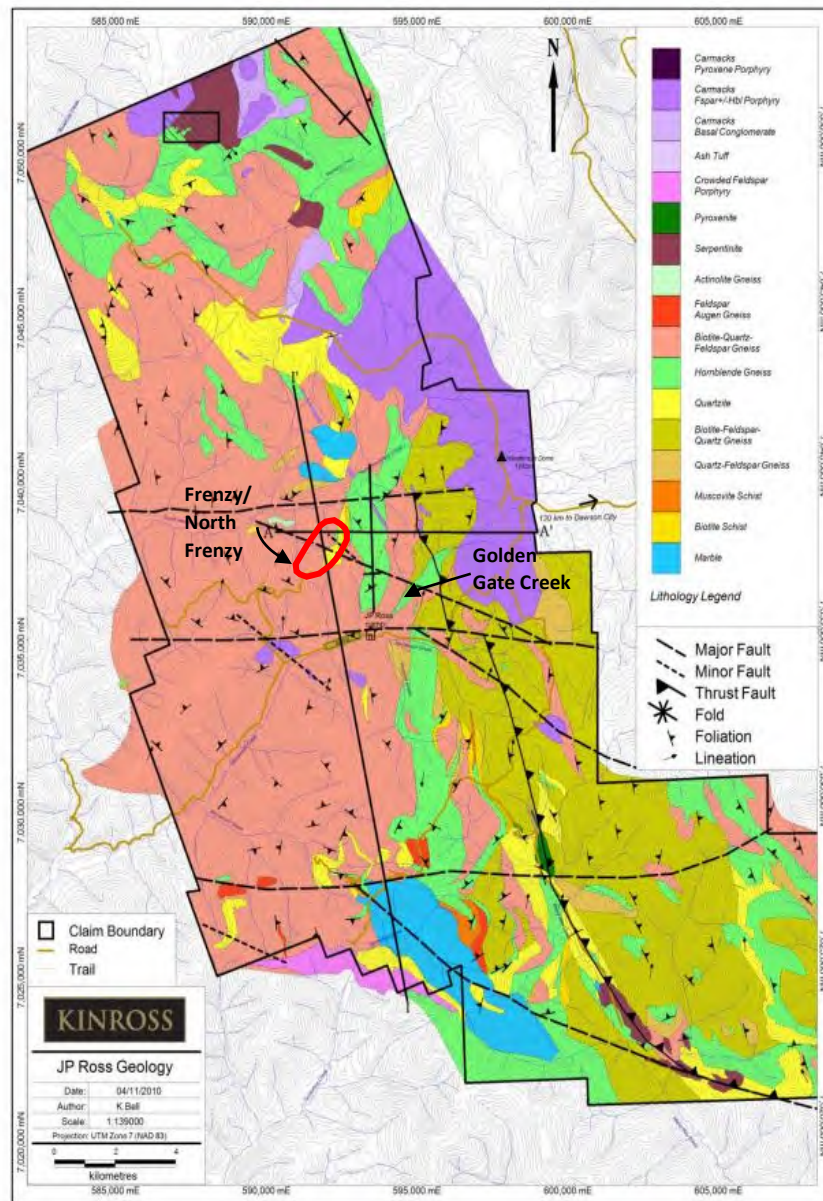


Excerpt of 2011 North Frenzy Drill Hole Locations (Symes et al., 2012b)

Lithologies observed in drill core at North Frenzy include biotite-quartz-feldspar-gneiss (BQFG), minor amphibolite and metasedimentary lithologies including banded quartzite, and biotite schist. Minor muscovite schist is interfingering with the banded quartzite and biotite schist. Mineralization was identified at North Frenzy in the drill core, and characterized by brecciated banded quartzite with a graphitic matrix. Some sericite and epidote alteration was also observed (Symes et al., 2012b).

The best gold grades in drill core at North Frenzy was an average of 2.34 g/t Au over a 4 m interval, from 7 – 11 m in hole JRNFR10D0004, drilled in 2010. This gold occurs within a zone of fractured and brecciated quartzite. This zone possibly contains fine-grained sulphides, but these were not identified at the time of logging. Gold grades from 2011 drill holes were not as good. Only hole JRNFR11D0007 yielded significant gold grades. A 2 m interval, from 10 – 12 m contains 1.245 g/t Au, and a 6 m interval, from 144 – 150 m contains 0.480 g/t Au. The gold is associated with pyrite in veinlets

Gold-bearing intervals at North Frenzy are generally small (up to 6 m), however some contain high-grades (up to 2.34 g/t Au over 4m). In addition, the North Frenzy area is underlain by a large gold-in-soil anomaly, as well as a large pathfinder anomaly. Further exploration recommendations include prospecting, and trenching, if possible, to aid in identifying drilling targets (Symes et al., 2012b).



Excerpt from 2011 Drill Report of lithology and fault zones in within the JP Ross Claims (Symes et al., 2012b)

## 7 2023 YMEP EXPLORATION TARGETS

The 2023 YMEP project conducted NBC was designed to investigate the potential for economical placer deposits on the Gate Claims on Golden Gate Creek given the historical gold production on Henderson Creek downstream of the Project Site, and results from previous geophysical surveys, geochemical testing, and drilling in the Frenzy / North Frenzy prospect areas and on Golden Gate Creek by JP Ross.

### 7.1 EXPLORATION TARGETS

The purpose of the 2023 YMEP project to target the underlying gravels located in the Golden Gate Creek drainage on the 21 claims identified in Section 2.3, upstream of the current H.C. Mining Limited operations on Henderson Creek. All exploration activities were conducted as authorized in Water Licence Class 4 Placer Land Use Approval PM15-097/AP15097.

Exploration work started near the upper end of the Gate 2 claim above the historically mined area on Golden Gate Creek and continued up the valley. Several drill holes were originally planned to target the area around the Gate 9 – Gate 12 claims where a mineralized strike slip fault has been inferred, and which has been attributed to the mineralization and source of gold in the area of the Frenzy and North Frenzy prospects identified by J.P. Ross. However, due to the timing of the exploration work, access was limited as a result of soft ground and exploration work was limited to the area of the Gate 9 – Gate 10 claims, and the claims below.

### 7.2 PROJECT ACTIVITIES

The following section provides a summary of the 2023 YMEP project activities conducted by NBC and the drilling contractor at the Project Site.

#### 7.2.1 PROJECT TEAM AND DUTIES

NBC retained Northern Sonic Drilling and Consultants (NSDC) to conduct a sonic drilling program on the Project Site. NBC provided support to NSDC during the drilling program, including road / trail clearing and additional trail construction, site observations, meals and lodging, and fuel supply.

NSDC provided a full size sonic drill rig and support equipment, mobilization and demobilization of drilling equipment, and labour for drilling and material processing.

DCES provided data interpretation services and prepared the YMEP status report and final summary report to support the YMEP program deliverables.

The number of workers on site during the program included:

- NBC Contracting Ltd. – 4 staff (Jason Kossler and 2 equipment operators and Geologist)
- Northern Sonic Drilling and Consultants – 3 staff

The number of days related to the project field work included:

- Working Days: 7 days total
  - Site assessment: 1 day
  - Access upgrades: 3 days
  - Sonic drilling: 2 days
  - Mobilization/Demobilization: 1 day
  - Reclamation: 1 day

### 7.3 PROJECT ACTIVITIES

A summary of the exploration activities performed by NBC and NSDC are provided below. A list of general 2023 YMEP project activities and dates are provided in Table 4.

#### Northern Sonic Drilling and Consulting (NSDC) Activities

- Mobilization of equipment and three staff members
  - Terra Sonic TSi 150c sonic drill and 6 inch diameter auger.
  - Foremost TVS1000 support vehicle.
  - Ford F350 Pick Up Truck for transportation.
- Fuel supply.
- Drilling of 19 sonic drill – 313.5 ft (95.6 m) in total depth.
- Drill core logging.
- Sample processing and gold recovery analysis.

#### NBC Contracting Ltd.

- Mobilization of equipment and two staff members
  - UTV
  - Truck
  - Dozer
  - CAT Excavator
- Meals / daily expenses
- Meals & lodging, fuel supply (for NSDC and NBC equipment)
- Access road/trail maintenance and trail construction
- Drill hole reclamation

Table 4. List of General 2023 YMEP Project Activities

Activities	Dates	Employees/Contractor
Site Assessment and Access Road/Trail Clearing	June 15 - June 17, 2023	NBC
Mobilization	June 21, 2023	NSDC
Drill Holes: N23-45 – N23-57	June 22, 2023	NBC, NSDC
Access Road/Trail Clearing	June 23, 2023	NBC
Drill Holes: N23-70 – N23-75	June 24, 2023	NBC, NSDC
Demobilization	June 25, 2023	NSDC
Reclamation (filling drill holes and reclaiming trails)	June 26, 2023	NBC

A pre-project site assessment was completed by NBC in mid June to evaluate access up the valley. Existing roads and trails were used on site and upgraded as necessary by NBC in mid June 2023 so that NSDC could access the site. Additional trail clearing was conducted during the drill program to assist NSDC in accessing claims above Gate 6.

At the time of the drill program, access up the valley was difficult due to soft ground after spring melt, limiting the ability to access the full width of the valley and also above the Gate 10 claim. Therefore the sonic drilling program focused on characterizing soil and bedrock conditions, and gold values within the lower section of the claim block between Gate 2 and Gate 10 where possible.

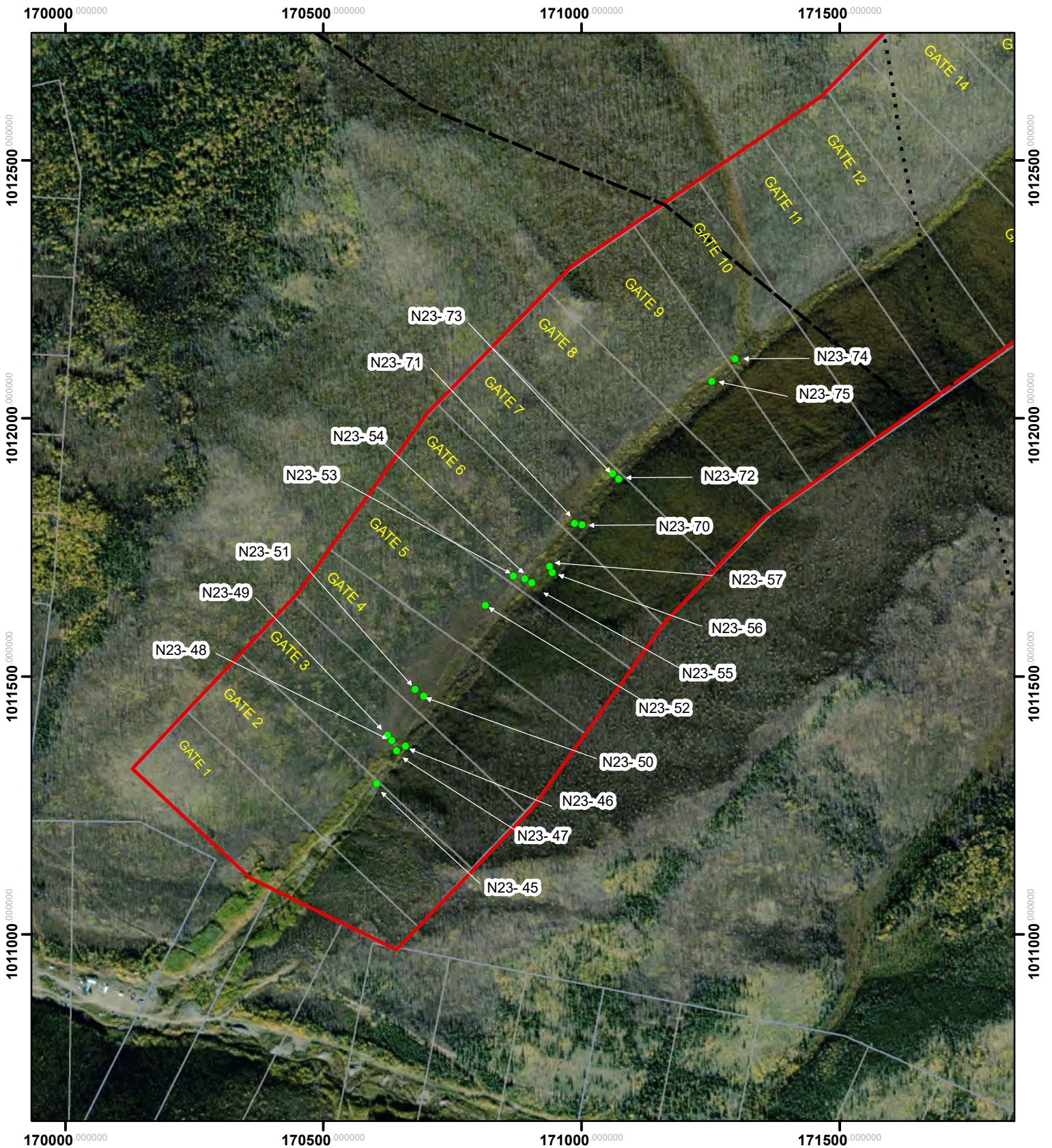
A Ford F350 pickup truck was used to transport NSDC crew to and from the Project Site. A Terra Sonic TSi 150c sonic drill and a Foremost TVS1000 support vehicle were used by NSDC to complete the drilling program. Samples were processed on site as they were drilled using a custom built sample trailer designed to minimize cross contamination of samples and allow for accurate core analysis.



*NSDC Terra Sonic Tsi 150c sonic drill rig and a Foremost TVS1000 support vehicle*

The NSDC sample trailer included a 12 ft long trough where the drill core was recreated and laid out for photographs and measurements. The core was then broken up and washed through a trommel with a scrubber section to further break up clay and organic materials. The trommel screened the material to  $\frac{1}{4}$ " in size. The screened material was then concentrated on a "LeTrap" sluice box liner. The concentrate was sieved with a #8 screen and panned down to be weighed. The pan tailings were then panned a second time to confirm nothing was missed. As an additional check, the total project pan tailings were run through the trommel and panned again.

Drill holes were back filled to minimize potential impacts to wildlife. Drill pad construction was not required during the sampling program. The 2023 sonic drill hole locations are presented in Figure 4.



<b>Legend</b> 2023 NBC YMEP Claims Surrounding Placer Claims Unknown Fault Strike Slip Fault	 0 100 200 400 <b>Meters</b>		<b>Title:</b> YMEP Drill Holes	
	Map Scale: 1:10,000 (printed on 8" x 11") Map Projection: NAD 1983 Yukon Albers Map information has been generated by DCES from ESRI, CanVec, NHN, and Government of Yukon sources. Information may contain errors from data sources.		<b>Proponent:</b> NBC Contracting	
	<b>Drawn by:</b> DC	<b>Date:</b> 2023-12-26	<b>Figure:</b> <b>4</b>	

## 7.4 SONIC DRILL RESULTS

A summary of the sonic drill hole results, including drill hole number, depth of gravels, depth to bedrock, total depth of borehole, description of frozen conditions, and gold values from sample processing are included in Table 5 for all 19 sonic drill holes. A summary of drill hole results, including geospatial coordinates for each drill hole location is included in Appendix B, while the NSDC drill logs are included in Appendix C.

## 7.5 DISCUSSION OF TARGET EVALUATION RESULTS

Within the area of the sonic drill program, the depth to bedrock ranged from 8 ft – 21.5 ft (2.4 m – 6.6 m) with an average depth of 12.7 ft (3.9 m). Gravel layers ranged from 1 ft to 9.5 ft (0.3 m – 2.9 m) in thickness with an average thickness of 5.9 ft (1.8 m).

The depth to bedrock is generally shallower on the left valley limit. Due to limitations in access, it was not possible to get a consistent cross section of drill holes at various locations up the valley to accurately capture the bedrock profile; however drill holes located along the right valley limit typically demonstrate a thicker overburden layer compared to the left limit.

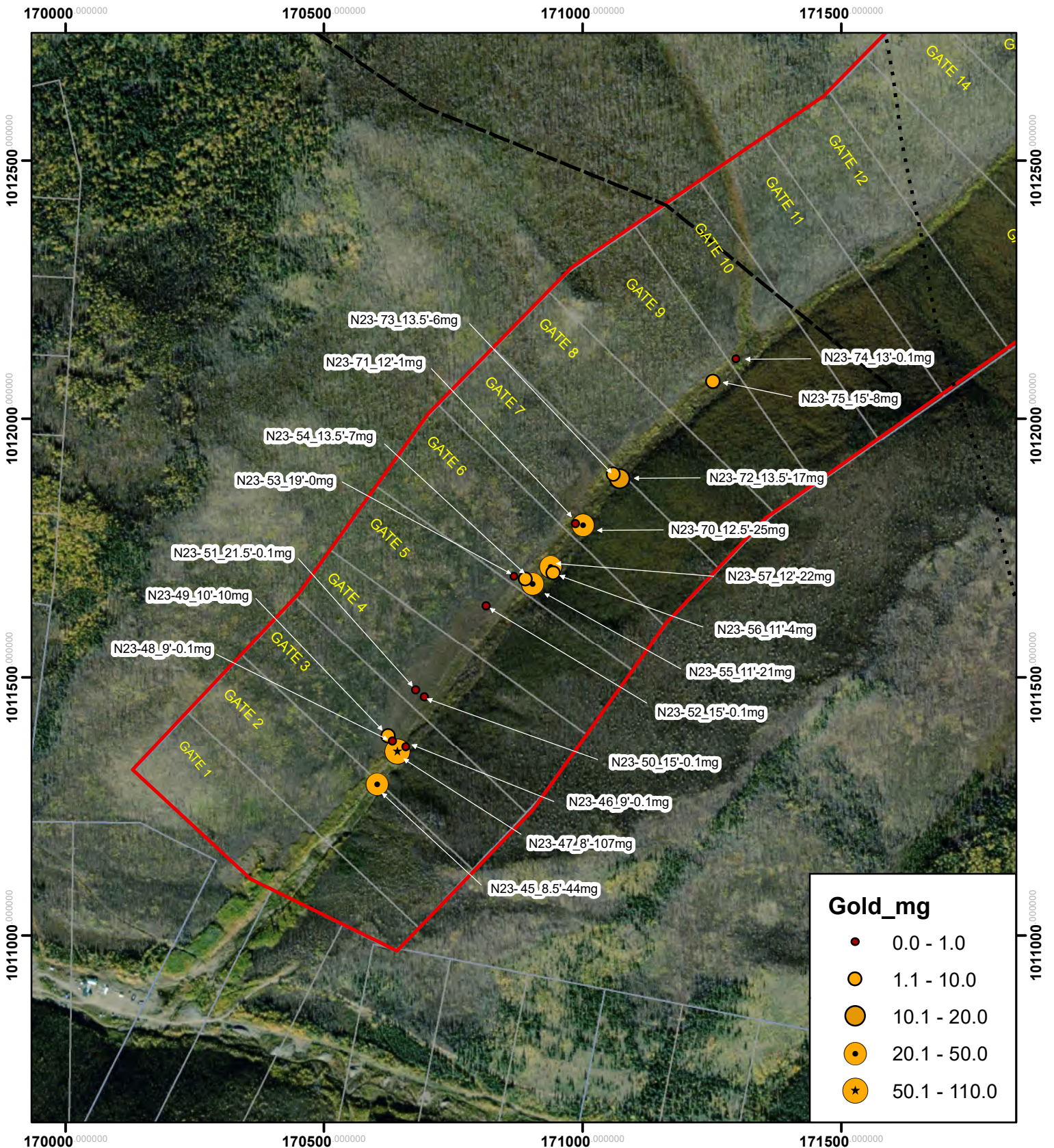
Drill hole locations, bedrock depth and gold values are presented in Figure 5 for all drill holes. Gold values were found to be the highest along the left limit of the Golden Gate Creek drainage in an estimated 20 m – 30 m band ranging from 21 mg to 107 mg, with zero to trace concentrations of placer gold along the right limit. There is a large gap in drill hole locations between the Gate 4 – Gate 6 and Gate 8 – Gate 10 claims along the left valley limit which makes it difficult to confirm the presence of a continuous potential pay streak in this area.

Drill logs suggest that the higher gold values along the left limit may be a result of a combination localized placer gold sources present in mineralized slide rock from the left valley wall, and also the result of placer gold deposition due to fluid transport processes from further up the drainage. The highest concentration of gold was identified in drill hole N23-47 along the left limit of Golden Gate Creek near in the lower section of the drainage (Gate 3) which has not been mined. Drill results at N23-47 also coincides with elevated gold in soil concentrations identified in 1999 by JP Ross (HC16), further supporting the potential presence of localized slide rock sources from the inferred fault zone in the Golden Gate Creek area that has been attributed to the Frenzy/North Frenzy prospects.

## 7.6 RECOMMENDATIONS FOR NEW EXPLORATION TARGETS

The sonic drill results from the 2023 YMEP program on Golden Gate Creek highlights the presence of a narrow band placer gold along the left valley limit of the drainage. As drilling was limited due to soil conditions at the time of the exploration program, it was not possible to evaluate surficial geology conditions up the valley above Golden Gate 10 where elevated gold in soil values were identified by JP Ross in 1999 (HC18). One of the specific target areas between Gate 10 – Gate 12 could not be evaluated, as well as further up the left valley limit of the Golden Gate Creek drainage. These areas remain as potential target areas for future investigations.

Additional drilling and/or geophysics programs are recommended along cross sections through the Golden Gate Creek drainage to further characterize bedrock and gold value conditions, particularly along the left valley limit between Gate 3 – Gate 6 and Gate 8 – Gate 12, and the area directly below the canyon near Gate 12 - Gate 14 as identified in the observations by JP Ross in 1999.



**Legend**

- 2023 NBC YMEP Claims
- Surrounding Placer Claims
- Unknown Fault
- Strike Slip Fault

Drill Hole #

N23-47\_8'-107mg

Bedrock Depth

Gold Value

N

0 100 200 400

Meters

Map Scale: 1:10,000 (printed on 8" x 11")  
 Map Projection: NAD 1983 Yukon Albers

Map information has been generated by DCES from ESRI, CanVec, NHN, and Government of Yukon sources. Information may contain errors from data sources.

<b>Title:</b> YMEP Drill Results		
<b>Proponent:</b> NBC Contracting		
<b>Drawn by:</b> DC	<b>Date:</b> 2023-12-26	<b>Figure:</b> <b>5</b>

Table 5. Summary of 2023 YMEP Sonic Drilling Results

Drill Hole	Top of Gravel Depth (ft)	Gravel Layer Depth (ft)	Bedrock Depth (ft)	Total Drill Hole Depth (ft)	Gold (mg)	Additional Details (gravels; bedrock)
N23-45	0	8.5	8.5	10	44	<p><u>Drill Hole:</u> 0-5: gravel; 5-8.5: gravel with angular bedrock; 8.5-10: flakey grey bedrock.</p> <p><u>Sample:</u> 5-7.5: brown fine gravel; 7.5-8.5: tan angular gravel (possible loose bedrock); 8.5-10: brown soft bedrock, turned to sand.</p>
N23-46	8	1	9	21	Trace	<p><u>Drill Hole:</u> 0-8: mixed; 9-10: poorly developed gravel; 10-18: loose wet fractured bedrock; 18-21: dry hard flakey bedrock.</p> <p><u>Sample:</u> 8-9: large round stones in a muck/gravel mix; 9-17: brown loose broken bedrock, gravel like.</p>
N23-47	4	4	8	13	107	<p><u>Drill Hole:</u> 0-4: muck; 4-8: loose rounded gravel; 8-11: dense decomposed bedrock transition, flakey; 11-15: hard dry bedrock.</p> <p><u>Sample:</u> 4-6: silty muck with stones; 6-8: brown sandy gravel; 8-11: grey/brown sandy bedrock; 11-13: grey hard intact bedrock.</p>
N23-48	2	7	9	14	Trace	<p><u>Drill Hole:</u> 0-3: muck; 3-7: angular mixed bedrock; 7-9: loose bedrock with silt; 9-14: clean hard fractured bedrock.</p> <p><u>Sample:</u> 2-6: brown sandy gravel; 6-9: sticky brown gravel; 9-12: brown sandy sticky decomposed bedrock.</p>
N23-49	8	2	10	14	10	<p><u>Drill Hole:</u> 0-4: dry soil; 4-5: rock; 5-8: muck/silt; 8-10: angular lose disturbed bedrock; 10-12: loose chippy bedrock; 12-15: hard dry bedrock.</p> <p><u>Sample:</u> 7-10: large round stones in brown sandy mix; 10-14: tan bedrock with small broken pieces.</p>
N23-50	12	3	15	17.5	Trace	<p><u>Drill Hole:</u> 0-12: mucky gravel, muck with some gravel layers; 12-15: nice coarse round gravel; 15-17.5: flakey schist.</p> <p><u>Sample:</u> 12-15: brown gravel with some sand; 15-17.5: large pieces of broken hard grey bedrock in a decomposed mix &amp; hints of orange.</p>

Drill Hole	Top of Gravel Depth (ft)	Gravel Layer Depth (ft)	Bedrock Depth (ft)	Total Drill Hole Depth (ft)	Gold (mg)	Additional Details (gravels; bedrock)
N23-51	17	4.5	21.5	24	Trace	<u>Drill Hole:</u> 0-2: muck; 2-17: silty sticky muck with some rocks; 17-21.5: coarse round gravel, 21.5-24: soft flakey grey bedrock. <u>Sample:</u> 17-18: rocky silty muck; 18-21.5: brown sticky gravel with some large cobble; 21.5-24: brown sandy bedrock.
N23-52	9	6	15	20	Trace	<u>Drill Hole:</u> 0-2: muck; 2-9: mucky sticky slide; 9-15: coarse gravel, 17-20: flakey bedrock. <u>Sample:</u> 10-15: brown gravel with some larger stones, silty at 10; 15-18: brown sandy bedrock with few hard pieces.
N23-53	12	7	19	24	0	<u>Drill Hole:</u> 0-2: muck; 2-12: mucky slide; 12-15: fine gravel; 15-19: coarse gravel; 19-22: loose fractured bedrock; 22-24: dry solid bedrock. <u>Sample:</u> 15-19: tan/brown gravel consisting mostly of angular loose bedrock pieces; 19-23: hard orange broken bedrock, small and large pieces, grey powder at 23.
N23-54	6	7	13	15.5	7	<u>Drill Hole:</u> 0-6: muck; 6-13: gravel; 13-15.5: bedrock, silty fractured refusal at 15.5. <u>Sample:</u> 8-13: angular gravel; 13-15.5: hard grey bedrock with assortment of sizes and shades.
N23-55	2	9	11	17	21	<u>Drill Hole:</u> 0-2: mud; 2-7: thawed gravel; 7-11: gravel becoming loose fractured bedrock; 11-17; bedrock, hard and dry from 13. <u>Sample:</u> 4-11: brown fine gravel, greyish towards 11; 11-14: hard grey bedrock with small intact pieces.
N23-56	2	9	11	14	4	<u>Drill Hole:</u> 0-2: muck; 2-11: loose angular gravel; 11-12.5: bedrock transition; 12.5-14; hard dry bedrock. <u>Sample:</u> 3-4: muck; 4-11: brown/dark gravels; 11-13: blue/grey hard bedrock.

Drill Hole	Top of Gravel Depth (ft)	Gravel Layer Depth (ft)	Bedrock Depth (ft)	Total Drill Hole Depth (ft)	Gold (mg)	Additional Details (gravels; bedrock)
N23-57	5	7	12	15	22	<p><u>Drill Hole:</u> 0-5: muck; 5-12: rounded coarse gravel; 12-15: fractured bedrock.</p> <p><u>Sample:</u> 5-12: grey gravels with some angular pieces, darker/mucky at 5; 12-15: hard grey bedrock with some small intact pieces, mostly crumbled.</p>
N23-70	5	7.5	12.5	15	25	<p><u>Drill Hole:</u> 0-5: muck; 5-10: silty gravel; 10-12.5: loose wet gravels, angular poorly sorted; 12.5-15: fractured bedrock, some decomposed bedrock near contact with silt bedding.</p> <p><u>Sample:</u> 8-12.5: brown sticky gravels with some large stones; 12.5-15: brown bedrock with small hard pieces and bits.</p>
N23-71	5	7	12	16	1	<p><u>Drill Hole:</u> 0-6: muck; 5-12: silty frozen gravel; 12-16: bedrock.</p> <p><u>Sample:</u> 8-10.5: grey gravel with angular and round stones; 10.5-13: fine brown gravel; 13-15: grey and brown somewhat decomposed bedrock with small intact pieces.</p>
N23-72	4	9.5	13.5	15	17	<p><u>Drill Hole:</u> 0-5: muck; 5-13.5: silty gravel transition to angular near contact; 13-15: clean obvious bedrock, contact/transition could be shallower.</p> <p><u>Sample:</u> 10-13.5: brown sticky gravel; 13.5-15: grey somewhat decomposed bedrock with some intact pieces.</p>
N23-73	10	3.5	13.5	17	6	<p><u>Drill Hole:</u> 0-3: muck; 3-10: muck with coarse rock; 10-13.5: silty fine gravel; 13.5-17: bedrock.</p> <p><u>Sample:</u> 10-14.5: brown gravel with muck at 10; 14.5-17: grey hard flakey bedrock with small pieces.</p>
N23-74	9	5	14	16	Trace	<p><u>Drill Hole:</u> 0-9: thawed muck/sand; 9-11: sand; 11-14: silty gravel; 14-16: dry fracture bedrock.</p> <p><u>Sample:</u> 9-10.5: muck; 10.5-13: dark fine gravel with a boulder; 13-16: hard intact brown bedrock with large pieces.</p>

Drill Hole	Top of Gravel Depth (ft)	Gravel Layer Depth (ft)	Bedrock Depth (ft)	Total Drill Hole Depth (ft)	Gold (mg)	Additional Details (gravels; bedrock)
N23-75	10	5	15	16.5	8	<p><u>Drill Hole:</u> 0-4: muck; 4-10: muck with coarse rock; 10-15: loose thawed gravel; 15-16.5: hard slab schist.</p> <p><u>Sample:</u> 10-15: brown sandy gravel with cobbly muck at 10; 15-16.5: hard large blocky pieces of bedrock, brown, grey and light.</p>

Future exploration is recommended in this drainage, which may be supported by future YMEP programs. Additional exploration work should be planned for early season (e.g., April/May) when ground conditions are still frozen in order to access further up the Golden Gate Creek drainage.

## 8 ESTIMATED ELIGIBLE EXPENDITURES

A summary of the estimated 2023 YMEP project eligible expenses are outlined in Table 6 below.

Table 6. Summary of Eligible Expenditures

Company	Expense	Description	Cost
Northern Sonic Drilling & Consulting Inc. (NSDC)	Drilling Services	<ul style="list-style-type: none"> <li>• Mobilization/Demobilization/Travel</li> <li>• 19 drill holes (313.5 ft total) using Sonic drill rig</li> <li>• Sample processing</li> <li>• Meals and Lodging</li> </ul>	\$ 23,764.50
NBC Contracting Ltd. (NBC)	Equipment Rentals/Supplies	<ul style="list-style-type: none"> <li>• ATV (7 days @ \$50/day)</li> <li>• D10 T2 Dozer (2 days @ \$490/hr*12 hr*0.75)</li> <li>• 2018 CAT 323 (4 days @ \$250/hr*12 hr*0.75)</li> </ul>	\$ 350.00 \$ 8,820.00 \$ 9,000.00
	Meals & Lodging	<ul style="list-style-type: none"> <li>• NBC (4 staff, 20 days total @ \$220/day)</li> <li>• NSDC (3 workers x 3 days @ \$220/day)</li> </ul>	\$ 4,400.00 \$ 1,980.00
	Staff / Support	<ul style="list-style-type: none"> <li>• Jason Kossler (7 days @ \$275/day)</li> <li>• Equipment Operator – Dozer (2 days @ \$275/day)</li> <li>• Equipment Operator – CAT 323 (4 days @ \$275/day)</li> <li>• Geologist (7 days @ \$500/day)</li> </ul>	\$ 1,925.00 \$ 550.00 \$ 1,100.00 \$ 3,500.00
	Daily Expenses	<ul style="list-style-type: none"> <li>• Jason Kossler (7 days @ \$100/day)</li> <li>• Equipment Operator – Dozer (2 days @ \$100/day)</li> <li>• Equipment Operator – CAT 323 (4 days @ \$100/day)</li> <li>• Geologist (7 days @ \$100/day)</li> </ul>	\$ 700.00 \$ 200.00 \$ 400.00 \$ 700.00
	Travel (Truck)	<ul style="list-style-type: none"> <li>• \$50 day x 7 days</li> </ul>	\$ 350.00
	Fuel (diesel & gas)	<ul style="list-style-type: none"> <li>• Fuel (NSDC &amp; NBC) – 3,550L (@ \$2.00/L)</li> </ul>	\$ 7,100.00
	DC Environmental Solutions (DCES)	Summary Report	<ul style="list-style-type: none"> <li>• Mapping &amp; Data Interpretation,</li> <li>• Summary Report &amp; Financial Summary</li> </ul>
<b>Total</b>			<b>\$ 68,139.50</b>

## 9 CONCLUSIONS

The 2023 Yukon Mineral Exploration Program (YMEP) project #23-010 on Golden Gate Creek was successfully completed by NBC Contracting Ltd., Northern Sonic Drilling and Consultants, and DC Environmental Solutions under the YMEP Placer module, with some limitations and adjustments to the original program scope due to access issues.

The program has provided good insight into the geological conditions in the lower reaches of the Golden Gate Creek drainage between Gate 2 and Gate 10, and has identified a narrow gold bearing placer deposit that may be mined through common placer mining practices.

The 2023 YMEP project took a total of 2 days field days to complete 19 sonic drill holes down to bedrock, including the logging of drill core samples and gold analysis of select core sample materials. Additional time was spent to upgrade access up the drainage for the sonic drill rig. A narrow pay channel was identified along the left limit of Golden Gate Creek. Additional drilling exploration and geophysics is recommended up the drainage to further delineate the potential pay channel and to further assess the potential of placer gold contribution from local slide rock sources along the left valley limit from Gate 3 to Gate 12, and above Gate 12 in the upper reaches of the Golden Gate Creek drainage.

## 10 QUALIFICATIONS

I, Darryl Cann, of the City of Whitehorse, YT hereby certify that my address is:

- 146 Mallard Way, Whitehorse YT Y1A 0J7;

That I am a graduate of the University of Guelph, Ontario with the following degrees:

- M.Sc. Environmental Engineering (2005)
- B.Sc. Environmental Engineering (2003)
- Hon. B.Sc. Environmental Science (1999)

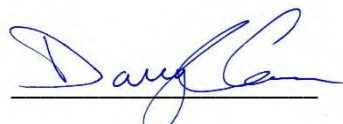
I am a registered Environmental Professional with ECO Canada.

That I have been involved in the preparation of funding applications, environmental assessment applications and regulatory permitting for industrial projects, and have provided environmental monitoring & compliance support on industrial projects in the Yukon since 2010.

I am author of the YMEP proposal entitled "*2023 Yukon Mineral Exploration Program (YMEP) YUKON Proposal Placer Module Target Evaluation on Golden Gate Creek, Yukon*", and this report.

I am the owner of DC Environmental Solutions.

Dated at Whitehorse, Yukon, on this 12<sup>th</sup> day of January, 2024.



Darryl Cann, M.Sc., EP  
DC Environmental Solutions

## 11 REFERENCES

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**Appendix A**  
**Claim Status Report**



# Claim Status report

2024-01-14 09:40 AM

Claim status	Claim name and number	Grant number	Claim expiry date	Claim owner	NTS Map	Grouping number	Notification Approval	Total Excess Credit
Active	Gate 1	P 10292	2024-10-30	H.C. Mining Ltd. - 100%	115O06	GD01519	LP01093	83
Active	Gate 2	P 10293	2024-10-30	H.C. Mining Ltd. - 100%	115O06	GD01519	LP01093	83
Active	Gate 3	P 10294	2024-10-30	H.C. Mining Ltd. - 100%	115O06	GD01519	LP01093	83
Active	Gate 4	P 10295	2024-10-30	H.C. Mining Ltd. - 100%	115O06	GD01519	LP01093	83
Active	Gate 5	P 10296	2024-10-30	H.C. Mining Ltd. - 100%	115O06	GD01519	LP01093	83
Active	Gate 6	P 10297	2024-10-30	H.C. Mining Ltd. - 100%	115O06	GD01519	LP01093	83
Active	Gate 7	P 10298	2024-10-30	H.C. Mining Ltd. - 100%	115O06	GD01519	LP01093	82
Active	Gate 8	P 10299	2024-10-30	H.C. Mining Ltd. - 100%	115O06	GD01519	LP01093	82
Active	Gate 9	P 10300	2024-10-30	H.C. Mining Ltd. - 100%	115O06	GD01519	LP01093	82
Active	Gate 10	P 10301	2024-10-30	H.C. Mining Ltd. - 100%	115O06	GD01519	LP01093	82
Active	Gate 11	P 10302	2024-10-30	H.C. Mining Ltd. - 100%	115O06	GD01519	LP01093	82
Active	Gate 12	P 10303	2024-10-30	H.C. Mining Ltd. - 100%	115O06	GD01519	LP01093	82
Active	Gate 13	P 10304	2024-10-30	H.C. Mining Ltd. - 100%	115O06	GD01519	LP01093	82
Active	Gate 14	P 10305	2024-10-30	H.C. Mining Ltd. - 100%	115O06	GD01519	LP01093	82
Active	Gate 15	P 10306	2024-10-30	H.C. Mining Ltd. - 100%	115O06	GD01519	LP01093	82
Active	Gate 16	P 10307	2024-10-30	H.C. Mining Ltd. - 100%	115O06	GD01519	LP01093	82
Active	Gate 17	P 10308	2024-10-30	H.C. Mining Ltd. - 100%	115O06	GD01519	LP01093	82
Active	Gate 18	P 10309	2024-10-30	H.C. Mining Ltd. - 100%	115O06	GD01519	LP01093	82
Active	Gate 19	P 10310	2024-10-30	H.C. Mining Ltd. - 100%	115O06	GD01519	LP01093	82
Active	Gate 20	P 10311	2024-10-30	H.C. Mining Ltd. - 100%	115O06	GD01519	LP01093	82
Active	Gate 21	P 10312	2024-10-30	H.C. Mining Ltd. - 100%	115O06	GD01519	LP01093	82



Criteria(s) used for search: Regulation type = Placer, Claim status = Active, Claim name = Gate.

Total claims selected: 21

This claim status report has been generated using the mining claims database online application <https://apps.gov.yk.ca/ymcs/> . This site uses a copy of the mining recorder data and is refreshed nightly. Contact the specific district for more information on a claim.

Dawson.mining@yukon.ca  
867-993-5343

Mayo.mining@yukon.ca  
867-996-2256

Watson.mining@yukon.ca  
867-536-7366

Whitehorse.mining@yukon.ca  
867-667-3190

**Appendix B**  
**Drill Hole Coordinates and Data Summary**

## Appendix B. Drill Hole Coordinates and Data Summary

NBC Contracting - YMEP 23-010

Name	Muck_ft	BR_ft	TD_ft	Gold_mg	Latitude	Longitude
N23- 45	0	8.5	10	44	63.43650055	-139.1190033
N23- 46	8	9	21	0.1	63.43719864	-139.1179962
N23- 47	4	8	11	107	63.43709946	-139.1179962
N23- 48	3	9	14	0.1	63.43730164	-139.1179962
N23- 49	8	10	15	10	63.43740082	-139.1190033
N23- 50	12	15	17.5	0.1	63.43809891	-139.1170044
N23- 51	17	21.5	24	0.1	63.4382019	-139.1179962
N23- 52	9	15	20	0.1	63.43980026	-139.1150055
N23- 53	12	19	24	0	63.44029999	-139.1139984
N23- 54	6	13.5	15.5	7	63.44029999	-139.1139984
N23- 55	2	11	17	21	63.44020081	-139.1139984
N23- 56	2	11	14	4	63.44049835	-139.1130066
N23- 57	5	12	15	22	63.44060135	-139.1130066
N23- 70	5	12.5	15	25	63.44129944	-139.1119995
N23- 71	5	12	16	1	63.44139862	-139.1119995
N23- 72	4	13.5	15	17	63.44219971	-139.1109924
N23- 73	10	13.5	17	6	63.44229889	-139.1109924
N23- 74	9	13	16	0.1	63.44449997	-139.1069946
N23- 75	10	15	16.5	8	63.44409943	-139.1080017

## **Appendix C**

### **Northern Sonic Drilling and Consulting Drill Logs**





























# Northern Sonic Placer Drill Hole Log

Rev. 2.0 08/08/21

Date 24/6/23

Project 23-0094

Location Golden Gate Creek

Client NBC

Hole ID 23-70

Core Dia. 8"

GPS

### Rig Notes

Depth

Material Description

0-5

Muck

5-10

Silty gravel

10-12.5

Loose wet gravels. Angular poorly sorted

12.5-15

Fractured br, some dc near contact with silt bedding

5

MK

Estimate

Number of Bags

6

Driller

Liam

12.5

BR

Interval saved

8.5-15

Helper

Sam

15

TD

Colour of Tags

Orange

Helper

### Wash Notes

Int. #

Depths

Top

-

Bottom

Material Description

8

-

15

15-12.5: Brown BR W small hard pieces & bits

-

12.5-8: brown sticky gravel W some large stones

-

-

-

-

Confirmed Bedrock Depth

12.5

Expected Pay Zone

### Panning Notes

Int. #

Gold Weight (mg)

Notes

25

Panner/Washer

Julian

Date

25/6/23





# Northern Sonic Placer Drill Hole Log

Rev. 2.0 08/08/21

Date 24/6/23

Project 23-0094

Location Golden Gate Creek

Client NBC

Hole ID 23-72

Core Dia. 8"

GPS

### Rig Notes

Depth

Material Description

0-5

Muck

5-13.5

Silty gravel transition to angular near contact

13.5-15

Clean obvious bedrock, contact/transition could be shallower

4

MK

Estimate

Number of Bags 5

Driller Liam

13.5

BR

Interval saved 10-15

Helper Sam

15

TD

Colour of Tags Red

Helper

### Wash Notes

Int. #

Depths

Top

-

Bottom

Material Description

10

-

15

15-13.5: grey somewhat decomp BR W some intact pieces

-

13.5-10: brown sticky gravel

-

-

-

-

Confirmed Bedrock Depth

13.5

Expected Pay Zone

### Panning Notes

Int. #

Gold Weight (mg)

Notes

17

Panner/Washer

Julian

Date

25/6/23







**Appendix D**  
**2023 YMEP Project Status Report**

# YMEP Project Status Report -



**Submit completed form by September 30 to:**

Yukon Mineral Exploration Program Energy, Mines and Resources Government of Yukon 102 - 300 Main Street Box 2703 (K102), Whitehorse, Yukon Y1A 2C6	email: ymep@gov.yk.ca tel: 867-456-3828 fax: 867-667-3198 toll free (in Yukon): 1-800-661-0408
---	---

YMEP no:		Applicant name		project name:	
Address				module:	
				type:	
phone 1:				phone 2:	
date submitted:				email:	

The purpose of this form is to help us keep track of budget expenditures to date. We need to keep this information current so please update us if significant changes occur between now and January 31st.

Has the program started:	yes				
	estimate total expenditures to date as of Sept 30				
	estimate pending expenditures				
	estimate total expenditures for program				
	Is the field portion of the program completed?				
	no				
	will it proceed	yes		when will it start	
		maybe		when will you know	
	no	are you withdrawing from this contribution agreement?			
Comments					