## **Assessment Report**

## Airborne Photogrammetry Survey and Geographic Information System ("GIS") Data Compilation Program, Kirkland Creek Property, Whitehorse Mining District, Yukon, Canada

on the claims

#### FN 145 to FN 180

Registered Owner: Deborah Morneau (Under Option to: Shoshoni Gold Ltd.)

#### WHITEHORSE MINING DISTRICT

N.T.S.: 115H 010

Centred on: Latitude: 61° 35′ 58″ N

Longitude: 136° 40′ 35″ W (UTM Datum: NAD 83 ZONE 8)

UTWI DULUMI: NAD 83 ZONE 8

On behalf of:

#### SHOSHONI GOLD LTD.,

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#### IRON MASK EXPLORATIONS LTD.,

700 – 1055 West Georgia Street, Vancouver, BC Canada V6E 3P3 Tel: 604 505 2233 January 15, 2019

(Field Work Completed October 3 to October 10, 2018)

## **SUMMARY**

During the period October 3 to October 10, 2018, Iron Mask Explorations Ltd. conducted exploration field work on the Kirkland Creek property owned by Shoshoni Gold Inc. The objective of the program was to complete an Unmanned Aviation Vehicle ("UAV") Photogrammetry Survey and reconnaissance geological mapping to contribute to the development of a comprehensive GIS database as a resource for prospectivity analysis and advance exploration targeting for the Kirkland Creek property.

Unexpected inclement weather at the site during the first week of October hampered the data collection process. Subsequently, while the photogrammetric data covering approximately 33% of was successfully acquired, snow cover limited the value of the image data and the ability to make geological observations, and operating conditions beyond the limits of equipment specification precluded the completing of the survey.

#### **TERMS OF REFERENCE**

Iron Mask Explorations Ltd. ("Iron Mask") was commissioned to submit a proposal for a high-resolution, UAV photogrammetry survey, 3D digital elevation modelling ("DEM") and digital data base compilation of historic work on the Kirkland Creek property located approximately 120 km northwest of Whitehorse, in Yukon, centered at latitude 61° 35′ 58″N and longitude 136° 40′ 35″W; UTM 410905E, and 6830720N (UTM Zone 8 - Nad83).

After a review of technical information provided by Shoshoni Gold Ltd. ("SHJ", or "Shoshoni") it was recommended that, based on the stage of exploration, the eight year hiatus since an active exploration program, the significant topographic relief of the property and the importance of the structural geological framework as a control on mineralization and exploration targeting, the project would benefit from the proposed work program and the creation a high resolution, orthophotographic, base-line dataset into which historic and future exploration data could be added.

#### These benefits include:

- The collection of precise and accurate geographic information system ("GIS") capable of generating base maps for planning and interpretation of exploration data;
- Generation of photogrammetric data capable of providing detailed topographic, relief, hydrogeological, geomorphological, bedrock geological data for use in creating thematic maps, to aid the assessment of prospectivity and exploration targeting;
- Generation of remotely sensed geological, structural geology and lineament analysis;
- Establish current environmental base-line data for land-cover, vegetation, watercourses, and areas of ground disturbance, and;
- Creation of a comprehensive digital database that would be valuable resource in assessing prospectivity, exploration targeting and the due diligence by potential joint venture partners.

UAV Photogrammetry Survey Digital Terrane Modelling and GIS Data Compilation will be executed by Iron Mask, on behalf of **Shoshoni Gold Ltd.** 

#### FIELD PROGRAM IMPLEMENTATION

While the proposed program was approved in early October 1, 2018, well beyond the generally accepted seasonal window for field work, available weather data indicated a ten-day window of unseasonal weather for the areas of Haines Junction and Carmacks (the two closest weather stations to the Kirkland Creek Property) that would allow field operations to be engaged.

Based on this information and confirmed through discussions with helicopter companies active in the region and Shoshoni Gold management, the decision was made to access the property and complete the proposed ten-day program. On October 3, 2018 Iron Mask mobilized technical personnel to Whitehorse

Despite favourable weather forecasts, field operations where challenged by local weather conditions at the site for most of the operating days between October 3 and October 10. Below-freezing temperatures, high winds, snowfall created less than optimal working conditions at the site and compromised the UAV equipment (outside the limits of recommended operating parameters for temperature and wind speed) and limited outcrop exposure and the ability to make field observations.

As a result, data acquisition for approximately two-thirds of the planned UAV Photogrammetry survey area was not achieved. Photogrammetric data acquired over the western third of the property was applicable for digital terrain modelling, however the value of the imagery for establishing baseline environmental data and interpreting geological information was limited by the snow cover.

Prominent outcrops that were not obscured by snowfall were mapped and recorded. However, none of the geological sites displayed the propolytic alteration that was the key observation indicating the potential existence of an epi-thermal, precious metal mineralizing system in the vicinity of the Kirkland Creek claims.

Compilation of historic regional and local geological, geophysical, geochemical and geographical information has been initiated and will be completed once the proposed program is concluded.

#### **PROPOSED PROGRAM COMPLETION:**

The completion date for the proposed UAV Photogrammetry program and the digital terrane - modelling has been updated to Q2, 2019, once seasonal weather conditions are within the recommended operating ranges for the UAV equipment.

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## **INTRODUCTION AND TERMS OF REFERENCE:**

In August 2018, Shoshoni Gold Ltd. ("The Issuer", or "Shoshoni"), requested a proposal from Iron Mask Explorations Ltd., ("Iron Mask") for a high-resolution, unmanned aviation vehicle ("UAV") photogrammetry survey and 3D digital elevation modelling ("DEM") and GIS data compilations work program for the Shoshoni's Kirkland Creek property located approximately 120 km northwest of Whitehorse, in Yukon, centered at latitude 61° 35′ 58″N and longitude 136° 40′ 35″W; UTM 410905E, and 6830720N (UTM Zone 8 - Nad83).

After a review of technical information provided by Shoshoni Gold Ltd. ("SHJ", or "Shoshoni") it was recommended that, based on the stage of exploration, the eight year hiatus since an active exploration program, the significant topographic relief of the property and the importance of the structural geological framework as a control on mineralization and exploration targeting, the project would benefit from the proposed work program survey and the creation a high resolution, ortho-photographic, base-line dataset into which historic and future exploration data can added.

#### These benefits include:

- Precise and accurate geographic information system ("GIS") capable of generating base maps for planning and interpretation of exploration data
- Ortho-photographic data capable of generating detailed topographic, relief, hydrogeology, geomorphology, bedrock exposure and other thematic maps
- Geological mapping; structural geology and lineament analysis
- Environmental base-line data and record current areas of ground disturbance and land cover

UAV Photogrammetry Survey will be executed by Iron Mask Explorations Ltd., hereinafter referred to as "Iron Mask", on behalf of *Shoshoni Gold Ltd.* 

#### PROGRAM SCOPE, OBJECTIVE, SCOPE AND SCHEDULE:

#### **PROGRAM OBJECTIVE:**

Complete a UAV photogrammetry survey, property evaluation and data compilation program in order to create a high-resolution Digital Terrain Model, compile a comprehensive digital database and complete a 43-101 report to re-examine the potential for gold mineralization on the Kirkland Creek property in the context of recent discoveries and new regional geological concepts.

#### PROGRAM SCOPE:

The program focus will be on priority areas of the Kirkland Creek property as designated by Shoshoni Gold management.

#### **PROGRAM SCHEDULE:**

The final report for the 2018 work program; Digital Terrain model, GIS database compilation and recommendations for exploration targeting and future field work, was projected to be

completed in the fourth-quarter of 2018. However, due to inclement weather during the field operations, the completion of the program and is now scheduled for Q2, 2019.

#### **DATA PRESENTATION AND DELIVERABLES:**

The project will deliver a final digital data-base and an archive of all relevant historic data as well as a 43-101 compliant report with conclusions as to the project's potential for the discovery of economic precious metal mineralization and recommendations for further work, as appropriate.

Final digital elevation model of the survey area, an archive of all survey data and a survey summary report will be delivered to **Shoshoni Gold Ltd.** as soon possible after the completion of field operations.

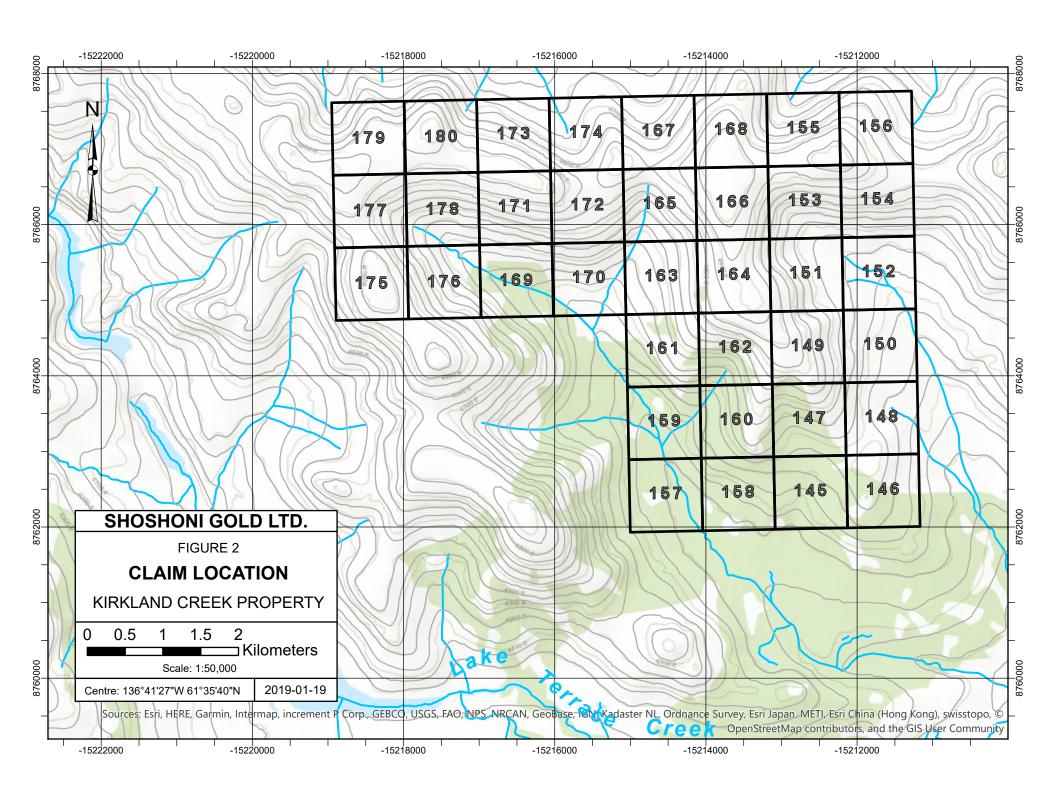
#### FIELD OPERATIONS:

Field operations were executed between October 3 to 10, 2018. While the best climate data available indicated favourable weather window during the first two weeks of October, the actual conditions at the property were outside the operating limits for the UAV equipment due to colder than acceptable temperatures and snowfall. As a result, only two of the four days of field operations had conditions acceptable for data collection. The proposed program only partially completed as planned.

The completion of the program has been proposed for Q2, 2019.

Figure 1: Location Map





## **RELIANCE ON OTHER EXPERTS:**

In preparing this proposal, Iron Mask has relied on data and information provided by the **Shoshoni Gold Ltd.,** and the 43-101 report: *Technical Report on the Kirkland Creek Property in Yukon, Canada; NTS Map 115 H-10; 61° 36'North - 136° 40' West, July 19th, 2010 by* Derrick Strickland, P.Geo, for New Shoshoni Ventures Ltd.

#### **DISCLAIMER:**

In the course of preparing the report, historic work programs and reports have been evaluated, analyzed and compiled into a digital database. Much of this information is historic and predates the implementation of NI 43-101. As such, the author may have relied on reports, opinions or statements of non-qualified persons.

The author has been unable to independently verify the information from the history section and these data are not necessarily indicative of the mineralization on the Kirkland Creek Property which is the subject of this technical report.

## PROPERTY DESCRIPTION AND LOCATION

#### **STATUS OF MINERAL TITLES:**

The Kirkland Creek Property of Shoshoni Gold Ltd.is located 120 kilometres northwest of Whitehorse and consists of thirty-six (36) valid, contiguous two-post Yukon Quartz claims (FN145 to FN 180) covering an area of seven-hundred and fifty (750) hectares in the Whitehorse Mining District. The Kirkland Creek property is located on NTS map sheet 115H-10 with its geographic centered at latitude 61° 35′ 58″N and longitude 136° 40′ 35″W; UTM 410905E, and 6830720N (UTM Zone 8 - Nad83). Figure 1 shows the general location of the property.

On November 30, 2006 claims: FN1 to FN119, FN121 to FN126, FN128 to FN129, and FN131 to FN139 were optioned form Deborah Moreau for 2,000,000 shares of Shoshoni Gold Ltd. Deborah Moreau retains a 3% net smelter royalty (NSR) on the property, of which 2% of the NSR can be purchased from Ms. Moreau for \$1,000,000. In addition to these terms, upon the fourth anniversary of option, must commence advance royalty payments of \$25,000 per annum until the property is put in to production.

Claims FN 1 to FN180 staked in the name of Deborah Moreau and were staked on behalf of the company. Claims FN 181- FN184 are in the name of Denis Jacob and were also staked on behalf of the company.

Since the 2010 report was written, claims FN1 to FN 144, and FN 181 to 184 expired and were not renewed.

Details of the claim holdings, the information having been obtained from the Yukon Mining Recorder are included in Table 1.

#### FIRST NATIONS TRADITIONAL TERRITORY:

The Kirkland Creek claim group is located within the Tradition Territory of the Little Salmon/Carmacks First Nation Traditional Territory.

The Little Salmon/Carmacks First Nation people are part of the Northern Tutchone language and cultural grouping and therefore are closely affiliated with the First Nations of: Mayo - Nacho Nyak Dun First Nation and Pelly Crossing - Selkirk First Nation. The three First Nations are formally associated through the Northern Tutchone Tribal Council, an organization which takes responsibility for some programs and services that have a common interest and concern to all three First Nations

The Little Salmon/Carmacks First Nation became self-governing in July, 1997. The registered population of First Nation members is numbered at approximately 500, of whom half live outside the community. With self-government the First Nation has the ability to make laws on its lands and on behalf of its citizens, and also has the option of taking over the delivery of programs and services for its membership (UNKNOWN, Little Salmon Carmacks First Nation website).

#### **ENVIRONMENTAL LIABILITIES:**

While the conditions prevalent during the field operations on the Kirkland Creek property were less than optimal for the assessment of existing environmental liabilities, no waste dumps or tailings ponds were observed during the property visit.

There are no known mineralized zones, mineral resources, mine workings or tailings ponds on the property. Shoshoni Gold Ltd. currently holds a permit to undertake mineral exploration and prospecting on the property.

The Yukon Quartz Mining Act (QMA) states a claim is a rectangular plot of ground that does not exceed 1,500' by 1,500'. All angles of a claim must be right angles, except in the cases where a boundary line of a previously located claim is adopted as common to both locations. The QMA does not specify work to be performed, except in dollar terms. Renewal of a quartz claim requires that \$100 of work be done per-claim per-year, based on the Schedule of Representation Work outlined in the QMA. Where work is not performed, the claimant may make a payment in lieu of work. The fee for payment in lieu is \$100 per claim per-year plus \$5 for the certificate of work per-claim per-year (Strickland, 2010).

Once completed 2018 UAV Photogrammetry data will provide a record of current environmental baseline information, i.e. ground disturbance, forestry and watercourses will be recorded.

# ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

#### **ACCESSIBILITY:**

The claims of the Kirkland Creek Property are located east of Aishihik Lake and 30 km west of the Klondike Highway near Kirkland Creek in the south-central Yukon on NTS Map Sheet 115H-10, centered at latitude 61° 35′ 58″N and longitude 136° 40′ 35″W; UTM 410905E, and 6830720N (UTM Zone 8 - Nad83).

Whitehorse, the capital of the Yukon Territory is approximately 120 kilometres southeast of the property. Helicopter and fixed-wing aircraft are the primary means of access to the property. Charter aircraft are available from Whitehorse, Haines Junction, and Carmacks. Small lakes located in the southwest and southeast sections of the property are adequate for float- or skiequipped aircraft. In the early 1980's there is a record of a winter road, south of the property.

#### **CLIMATE:**

This region has a central interior climate characterized by long cold winters and dry warm summers. Temperatures average up to 15 degrees Celsius in summer and range from 0 to -50 degrees Celsius in winter. Annual precipitation averages 30 centimetres, with snow packs of 50 centimetres

#### **LOCAL RESOURCES:**

The local region contains little in the way of resources that could be applied to current or future exploration efforts. Personnel and technical resources are readily available in Whitehorse.

#### **INFRASTRUCTURE:**

The location Kirkland Creek property is considered remote, with no significant infrastructure available at the site that could be applied to exploration or mining. Historic tote roads into the Kirkland Creek area supported some of the early exploration in the region, however, there are no maintained access roads to the property.

#### **PHYSIOGRAPHY**

The Kirkland Creek property lies in a broad upland area of the eastern Yukon Plateau. The Yukon Plateau physiographic unit. The physiography of the Kirkland Creek property is characterized by wide plateaus and valleys, rounded hills, old lake-bottom flats and terraces. The central and northern portion of the property is above tree line, consisting of long interconnected ridges and spurs rising up to 1,525 metres; separated by wide flat-bottomed valleys. The ridge tops are broad and grassy with few rocky sections. Ridge walls are steep; the southern and westerly facing slopes are grassy with sections of alder and rock talus. Spruce and pine forests are limited to lower elevations, and valley bottoms are typically swampy. Lake Terrace Creek flows easterly, 2 kilometres south of the Kirkland Creek claim block.

|                 | Table 1: List of Claims |                 |                       |                             |                 |                      |        |                   |  |  |  |  |
|-----------------|-------------------------|-----------------|-----------------------|-----------------------------|-----------------|----------------------|--------|-------------------|--|--|--|--|
| Grant<br>Number | Claim<br>Name           | Claim<br>Number | Claim Owner           | Operation<br>Recording Date | Staking<br>Date | Claim<br>Expiry Date | Status | NTS<br>Map Number |  |  |  |  |
| YC57931         | FN                      | 145             | Deborah Moreau - 100% | 2007-01-26                  | 2007-01-25      | 2019-01-26           | Active | 115H10            |  |  |  |  |
| YC57932         | FN                      | 146             | Deborah Moreau - 100% | 2007-01-26                  | 2007-01-25      | 2019-01-26           | Active | 115H10            |  |  |  |  |
| YC57933         | FN                      | 147             | Deborah Moreau - 100% | 2007-01-26                  | 2007-01-25      | 2019-01-26           | Active | 115H10            |  |  |  |  |
| YC57934         | FN                      | 148             | Deborah Moreau - 100% | 2007-01-26                  | 2007-01-25      | 2019-01-26           | Active | 115H10            |  |  |  |  |
| YC57935         | FN                      | 149             | Deborah Moreau - 100% | 2007-01-26                  | 2007-01-25      | 2019-01-26           | Active | 115H10            |  |  |  |  |
| YC57936         | FN                      | 150             | Deborah Moreau - 100% | 2007-01-26                  | 2007-01-25      | 2019-01-26           | Active | 115H10            |  |  |  |  |
| YC57937         | FN                      | 151             | Deborah Moreau - 100% | 2007-01-26                  | 2007-01-25      | 2019-01-26           | Active | 115H10            |  |  |  |  |
| YC57938         | FN                      | 152             | Deborah Moreau - 100% | 2007-01-26                  | 2007-01-25      | 2019-01-26           | Active | 115H10            |  |  |  |  |
| YC57939         | FN                      | 153             | Deborah Moreau - 100% | 2007-01-26                  | 2007-01-25      | 2019-01-26           | Active | 115H10            |  |  |  |  |
| YC57940         | FN                      | 154             | Deborah Moreau - 100% | 2007-01-26                  | 2007-01-25      | 2019-01-26           | Active | 115H10            |  |  |  |  |
| YC57941         | FN                      | 155             | Deborah Moreau - 100% | 2007-01-26                  | 2007-01-25      | 2019-01-26           | Active | 115H10            |  |  |  |  |
| YC57942         | FN                      | 156             | Deborah Moreau - 100% | 2007-01-26                  | 2007-01-25      | 2019-01-26           | Active | 115H10            |  |  |  |  |
| YC57943         | FN                      | 157             | Deborah Moreau - 100% | 2007-01-26                  | 2007-01-25      | 2019-01-26           | Active | 115H10            |  |  |  |  |
| YC57944         | FN                      | 158             | Deborah Moreau - 100% | 2007-01-26                  | 2007-01-25      | 2019-01-26           | Active | 115H10            |  |  |  |  |
| YC57945         | FN                      | 159             | Deborah Moreau - 100% | 2007-01-26                  | 2007-01-25      | 2019-01-26           | Active | 115H10            |  |  |  |  |
| YC57946         | FN                      | 160             | Deborah Moreau - 100% | 2007-01-26                  | 2007-01-25      | 2019-01-26           | Active | 115H10            |  |  |  |  |
| YC57947         | FN                      | 161             | Deborah Moreau - 100% | 2007-01-26                  | 2007-01-25      | 2019-01-26           | Active | 115H10            |  |  |  |  |
| YC57948         | FN                      | 162             | Deborah Moreau - 100% | 2007-01-26                  | 2007-01-25      | 2019-01-26           | Active | 115H10            |  |  |  |  |
| YC57949         | FN                      | 163             | Deborah Moreau - 100% | 2007-01-26                  | 2007-01-25      | 2019-01-26           | Active | 115H10            |  |  |  |  |
| YC57950         | FN                      | 164             | Deborah Moreau - 100% | 2007-01-26                  | 2007-01-25      | 2019-01-26           | Active | 115H10            |  |  |  |  |
| YC57951         | FN                      | 165             | Deborah Moreau - 100% | 2007-01-26                  | 2007-01-25      | 2019-01-26           | Active | 115H10            |  |  |  |  |
| YC57952         | FN                      | 166             | Deborah Moreau - 100% | 2007-01-26                  | 2007-01-25      | 2019-01-26           | Active | 115H10            |  |  |  |  |
| YC57953         | FN                      | 167             | Deborah Moreau - 100% | 2007-01-26                  | 2007-01-25      | 2019-01-26           | Active | 115H10            |  |  |  |  |
| YC57954         | FN                      | 168             | Deborah Moreau - 100% | 2007-01-26                  | 2007-01-25      | 2019-01-26           | Active | 115H10            |  |  |  |  |

|         | List of Claims continued |        |                       |            |            |                    |        |        |  |  |  |  |  |
|---------|--------------------------|--------|-----------------------|------------|------------|--------------------|--------|--------|--|--|--|--|--|
|         |                          |        |                       | Operation  |            |                    |        | NTS    |  |  |  |  |  |
| Grant   | Claim                    | Claim  |                       | Recording  | Staking    | Claim              |        | Map    |  |  |  |  |  |
| Number  | Name                     | Number | Claim Owner           | Date       | Date       | <b>Expiry Date</b> | Status | Number |  |  |  |  |  |
| YC57955 | FN                       | 169    | Deborah Moreau - 100% | 2007-01-26 | 2007-01-25 | 2019-01-26         | Active | 115H10 |  |  |  |  |  |
| YC57956 | FN                       | 170    | Deborah Moreau - 100% | 2007-01-26 | 2007-01-25 | 2019-01-26         | Active | 115H10 |  |  |  |  |  |
| YC57957 | FN                       | 171    | Deborah Moreau - 100% | 2007-01-26 | 2007-01-25 | 2019-01-26         | Active | 115H10 |  |  |  |  |  |
| YC57958 | FN                       | 172    | Deborah Moreau - 100% | 2007-01-26 | 2007-01-25 | 2019-01-26         | Active | 115H10 |  |  |  |  |  |
| YC57959 | FN                       | 173    | Deborah Moreau - 100% | 2007-01-26 | 2007-01-25 | 2019-01-26         | Active | 115H10 |  |  |  |  |  |
| YC57960 | FN                       | 174    | Deborah Moreau - 100% | 2007-01-26 | 2007-01-25 | 2019-01-26         | Active | 115H10 |  |  |  |  |  |
| YC57961 | FN                       | 175    | Deborah Moreau - 100% | 2007-01-26 | 2007-01-25 | 2019-01-26         | Active | 115H10 |  |  |  |  |  |
| YC57962 | FN                       | 176    | Deborah Moreau - 100% | 2007-01-26 | 2007-01-25 | 2019-01-26         | Active | 115H10 |  |  |  |  |  |
| YC57963 | FN                       | 177    | Deborah Moreau - 100% | 2007-01-26 | 2007-01-25 | 2019-01-26         | Active | 115H10 |  |  |  |  |  |
| YC57964 | FN                       | 178    | Deborah Moreau - 100% | 2007-01-26 | 2007-01-25 | 2019-01-26         | Active | 115H10 |  |  |  |  |  |
| YC57965 | FN                       | 179    | Deborah Moreau - 100% | 2007-01-26 | 2007-01-25 | 2019-01-26         | Active | 115H10 |  |  |  |  |  |
| YC57966 | FN                       | 180    | Deborah Moreau - 100% | 2007-01-26 | 2007-01-25 | 2019-01-26         | Active | 115H10 |  |  |  |  |  |

## **HISTORY**

#### **SUMMARY OF PREVIOUS WORK PROGRAMS:**

The Aishihik Lake – Kirkland Creek area has a long history of intermittent exploration dating from before the 1896 discovery of rich placer gold deposits in the Klondike. Prospectors searching for placer gold first passed through the Kirkland Creek region during the 1880's during the initial Klondike gold rush stampede. The Dalton Trail, which provided access from the coast at Haines, Alaska to the Klondike, partly followed along Kirkland Creek and the presence of fine placer gold in creeks draining into Kirkland Creek form the area now covered by the property was noted (Strickland, 2010).

Prospectors traversed the Aishihik region exploring for both placer gold occurrences and lode deposits of copper and/or gold-silver-lead-zinc mineralization. Numerous prospects have been located during the various exploration surges, including gold-copper deposits near Hopkins and Giltana Lakes and gold-silver deposits at Mt. Nansen. The area covered by the property was traversed by prospectors working for major mining companies on regional copper-molybdenum porphyry and uranium exploration projects during the 1970's. At this time, several claim groups were explored on and around the current property by companies such as Noranda Exploration and Mitsubishi and tested for "porphyry" copper mineralization.

In 1987-1988 a regional stream sediment geochemical survey was performed over the Aishihik Lake map sheet, funded by the Yukon Territorial Government and the Department of Energy, Mines and Resources. A large area underlain by Tertiary volcanic rocks showed anomalous gold, arsenic, antimony and mercury values. Claims in the area were staked as a result of the geochemical anomalies. In 1989, claims were explored by both Golden Hemlock Exploration Ltd. and Golden Quail Exploration Ltd.

Gold exploration in the 1980's focused on the Cretaceous to Tertiary volcanic events in the south-central Yukon. Several prospects were staked in the Kirkland Creek area, but no significant results were reported. Placer gold testing was performed on three creeks draining easterly into Kirkland Creek property.

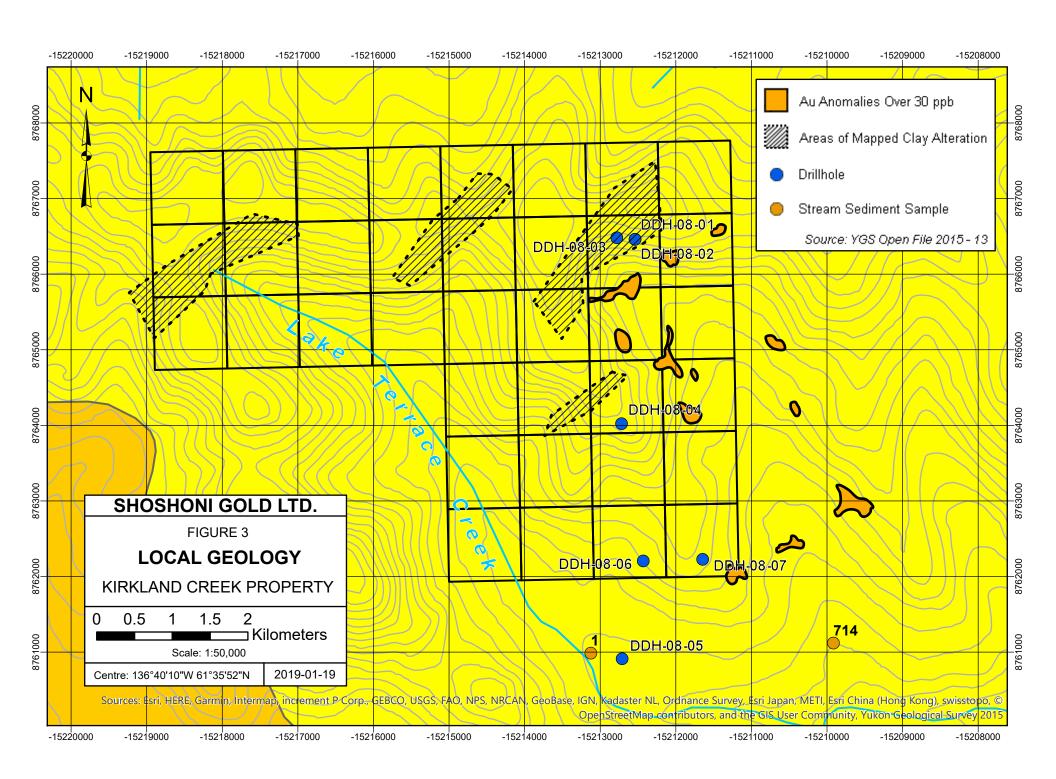
**Table 2: Summary of Previous Regional and Property Specific Work Programs** 

| Date          | Company                                | Property                                   | Work<br>Program               | Minfile<br>Number | Results  |
|---------------|--|--|-------------------------------|-------------------|--|
| 1888          | Klondike gold rush prospectors         | Dalton Trail<br>& Kirkland<br>Creek Valley | Prospecting                   | N/A               | the presence of fine placer gold in creeks draining into Kirkland Creek form the area now covered by the Kirkland Creek property was noted .   |
|               | Noranda<br>Exploration                 | Aishihiik Lake<br>Regional<br>Exploration  | Prospecting                   | 090814            | <ul> <li>Numerous prospects located during the various exploration surges,<br/>including gold-copper deposits near Hopkins and Giltana Lakes and gold-<br/>silver deposits at Mt. Nansen</li> </ul>  |
| 1970<br>-1980 | Mitsubishi<br>Metals Mining<br>Co.     | Aishihiik Lake<br>Regional<br>Exploration  | Prospecting                   | 060992            | • First staked as the KL claimY35167) in Aug/69 and as the Mak cl (Y54405) in Sep/70 by Mitsubishi Met Mg CL, which constructed a tote trail to the property and conducted geochemical sampling, IP surveys and bulldozer trenching in 1970 and drilled 7 holes (789.4 m) in 1971.   |
|               | Can Occidental<br>Petroleum Ltd.,      |  | Prospecting                   | 115H032           | <ul> <li>Staked as the KL claim (Y67680) in Nov/72 by Can Occidental Pet L following a regional geochemical exploration program.</li> <li>The claims are interpreted as underlain by hornblende granodiorite. Several slightly anomalous copper values were obtained from stream sediment samples collected in this general area during previous regional geochemical programs.</li> </ul> |
| 1987<br>-1988 | Yukon Energy<br>Mines and<br>Resources | Aishihiik Lake<br>Map Sheet                | Regional<br>Stream<br>Geochem |                   | <ul> <li>A large area underlain by Tertiary volcanic rocks showed anomalous gold, arsenic, antimony and mercury values.</li> <li>Claims in the area were staked as a result of the geochemical anomalies</li> </ul>  |

| 1989 | Golden Quail      |                       | Prospecting | 092772  | <ul> <li>Restaked by Golden Quail Resources Ltd as part of a block of 800 Nick claims (YB24764) in 1989. Golden Quail performed airborne geophysical surveys in spring, 1990 and ground VLF-magnetic surveys, geochemistry and mapping later that year.</li> <li>Golden Quail Resources Ltd. undertook a regional exploration program in 1989 to evaluate the area's gold potential. A total of 103 silt samples were collected from a wide array of streams draining onto the property. Samples were analyzed for gold, platinum and palladium. In addition to the silt samples, 24 rock samples were collected from various outcrops exhibiting some degree of alteration. These samples were also analyzed for gold, platinum and palladium. one of the silt samples returned 2,200 ppb Gold. The particular sample mentioned has a</li> <li>Age determinations and alteration examinations were completed in</li> </ul> |
|------|-------------------|-----------------------|-------------|---|---|
|      | Golden Hemlock    |                       |             |   | 1997 (Lewis and Mortensen, 1998).   |
|      | Exploration Ltd.  | NICK 1                | Prospecting | 092959  | Claim staking and prospecting   |
|      |                   |                       |             |   | <ul> <li>In May 1990, Golden Hemlock Exploration Ltd. undertook an airborne<br/>geophysical survey in the Property area over its "NICK 1" claim. A total<br/>of 417 line-kilometres of electromagnetic (EM), magnetic and VLF<br/>surveys were performed.</li> </ul>  |
| 1990 | Golden Hemlock    | NICV 1                | Airborne    | 092959  | Airborne anomalies coinciding with high gold values in stream sediment samples were targeted for surface work.  |
| 1990 | Explorations Ltd. | ns Ltd. NICK 1 Mag/EM | 092959      | • regional sampling and mapping program along with a soil grid was established. Soil Grid B consisted of 28 line-kilometres of sampling with a line-spacing of 100 metres and sampling stations at 25 metres. The Grid gave rise to several anomalous areas with gold values over 30 ppb. |   |
|      |                   |                       |             |   | • In the airborne survey of the NICK 1 group, most of the EM anomalies were attributed to surficial sources but may indicate the presence of  |

|       |              |                         |                         |  | bedrock conductors.  |
|-------|--------------|-------------------------|-------------------------|--|--|
|       |              |                         |                         |  | Five Dighem VLF anomalies (labelled: Q through U) were screened from the data, which show the location of potential, logical structures favourable for precious metal mineralization.    |
|       |              |                         |                         |  | Geophysical anomalies coinciding with high gold values in stream sediment samples were targeted for surface work.  |
|       |              |                         | Regional mapping,       |  | • The geochemical responses are fairly poor on grid B. On the B grid, gold values of 30 ppb or higher are outlined on Figure 3.  |
|       | NICK 1       | sampling & soil geochem | 092772                  | The geochemical sampling on the grid was performed in very swampy ground with thick organic and clay layers. |  |
|       |              |                         | geochem                 |  | Future soil geochemical sampling should target hillsides and ridge crests and avoid low-lying wet ground.  |
|       |              | Kirkland                | Line Cutting            | 095041   | <ul> <li>An 85km survey grid to IP specifications established to cover an area of<br/>extensive hydrothermal alteration in volcanic rock.</li> </ul>                                     |
|       |              |                         | Induced<br>Polarization | 095041   | <ul> <li>A 3.6 line-km IP survey was undertaken to assist with the geological<br/>mapping process, by outlining subsurface features as well as delineating<br/>drill targets.</li> </ul> |
| 2007  | New Shoshoni |                         | Soil<br>Sampling        | 095041   | 476 soil samples collected and analyzed  |
| -2008 | Gold Ltd.,   | Creek                   |                         |  | Shoshoni Gold Ltd. undertook an exploration drill program consisting of seven drill holes for a total 1,116 metres   |
|       |              |                         | Diamond<br>Drilling     | 115H<br>057  | <ul> <li>Drilling targeted geology, gold geochemical anomalies and ground and<br/>airborne geophysical anomalies overlying Tertiary and Eocene volcanic<br/>rocks.</li> </ul>            |
|       |              |                         |                         |  | The volcanic complex is a target for epithermal-type mineralization. (LeBarge et al)   |

|      |                           |                   |   |   | <ul> <li>DDH 2008-06 and DDH 2008-07 drilled proximal to DDHs 2008-01 to DDH<br/>2008-05, all of which were abandoned prior to testing their targets due<br/>to drill penetration problems caused by epithermal clay alteration<br/>minerals.</li> </ul> |
|------|---------------------------|-------------------|---|---|--|
|      |                           |                   | • 41 samples of volcanic rocks of basaltic and andesitic composition and volcanaclastic intermediate ash/lapilli tuffs selected from DOH 2008-06 and 07 for lab analysis submitted to Acme Labs (Vancouver) for 32 element geochemical analysis |   |  |
|      |                           |                   | Sample<br>Processing<br>and<br>Analysis   |   | <ul> <li>Supergene green the copper-chloride mineral atacamite was identified<br/>in 5 of these samples and present in two other holes (DOH 2008-05 and<br/>DOH 2008-07).</li> </ul>   |
| 2009 | New Shoshoni<br>Gold Ltd. | Kirkland<br>Creek |   | 095244  | • X-ray diffraction analysis identified montmorillonite as the primary clay mineral (Teck Report).   |
|      |                           | Andrysis          |   |   | • High Fe coincident with areas of hematite cemented breccia zones; elevated values of Ba and Mn are occasionally present  |
|      |                           |                   |   | <ul> <li>economic elements (Au/Cu/Ag/Pb/Zn) are not present in anomalous<br/>amounts</li> </ul> |  |
|      |                           |                   |   |   | copper does appear to be elevated.   |



## **GEOLOGICAL SETTING AND MINERALIZATION**

#### REGIONAL GEOLOGY

The Yukon Plateau of western and south-central Yukon is underlain by Intermontane terranes including the Slide Mountain, Yukon-Tanana, Quesnellia, Stikinia and Cache Creek terranes. These intermontane terranes represent a mid- to late Paleozoic marginal ocean basin (Slide Mountain) and a series of mid-Paleozoic to early Mesozoic nested arc complexes (Yukon-Tanana, Quesnellia, Stikinia).

The Kirkland property lies within the northern extension of the Stikinia Terrane in southwest Yukon, one of the two of the most prominent arc terranes of the Canadian Cordillera. The Stikinia Terrane is characterized by Triassic volcanic rocks overlying locally exposed, mid to late Paleozoic volcano-sedimentary sequences.

Late Triassic-Early Jurassic (ca. 205-185 Ma) plutons affiliated with Stikinia are well known for their world-class Cu-Au and CuMo porphyry deposits in British Columbia; in Yukon, they are host to Cu-Au-Ag deposits at Minto and Carmacks Copper (Nelson and Colpron, 2007). Late Triassic-Early Jurassic plutons also intrude Triassic and older rocks of the Stikinia.

Strickland described the regional geology in his 2010 report <u>Technical Report on the Kirkland</u> <u>Creek Property in Yukon</u>.

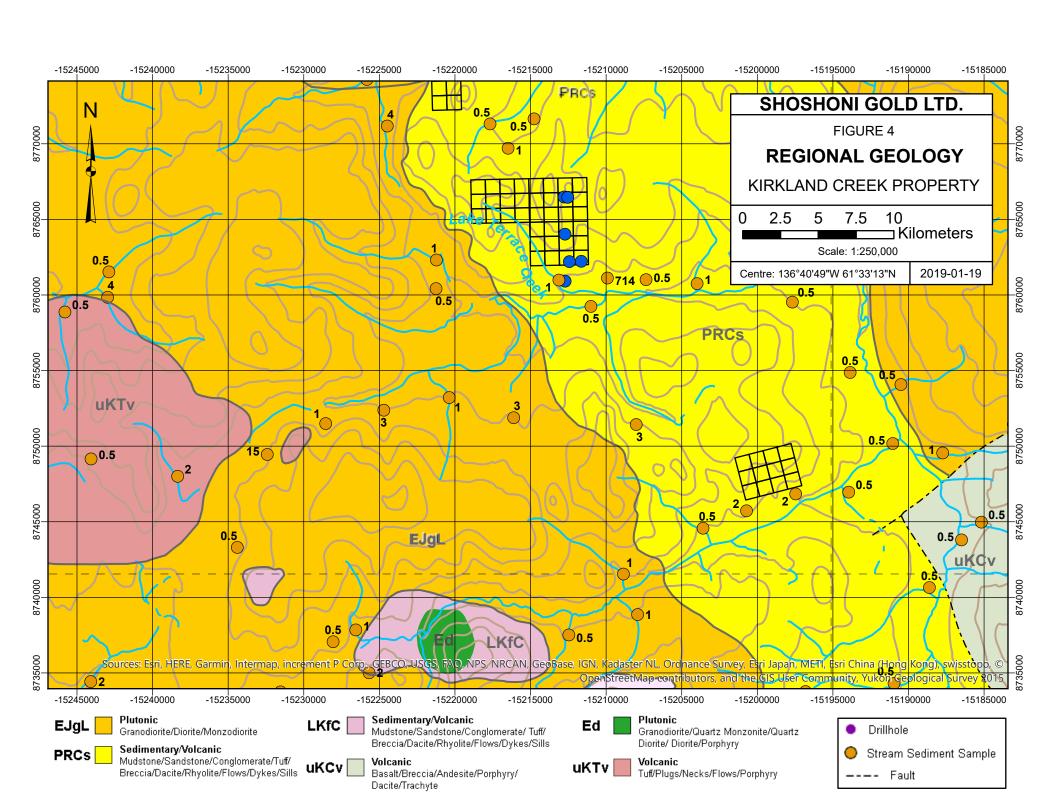
"The Kirkland Creek area lies in the Yukon Crystalline Terrane, an assemblage of Yukon Group schist, gneiss, and amphibolite; Triassic andesite to basalt flows and tuff breccia; intruded by granitic batholiths. Eocene volcanic rocks unconformably overlie the basement units. The regional geology was published by the GSC as Map 17-1973 (D. Templeman-Kluit).

The Aishihik Batholith underlies much of the district. Triassic to Lower Jurassic in age, the intrusive body ranges in composition from dark grey granodiorite to pink quartz monzonite and porphyritic quartz monzonite. Tertiary and Eocene volcanic rocks unconformably overlie the granitic bodies. On the property the volcanics consist primarily of felsic tuffs, flows and breccias which weather white, yellow or red in colour. Dark green mafic volcanic plugs and dykes cut the felsic units. Structurally, a major northwest trending fault traverses the property. Other prominent features include east-west faults along Lake Terrace Creeks, and north westerly trending faults along the Black Lake valley.

Cretaceous to Tertiary volcanic rocks host lode gold deposits in the Dawson Range, north of the property and in the Wheaton District, south of the Aishihik area. Lode mineralization consists of epithermal to mesothermal gold bearing quartz-chalcedony vein systems in faults and fracture zones associated with felsic intrusives. In the Wheaton

Valley ring dykes and fault zones developed during caldera collapse. In the Dawson Range gold mineralization occurs in quartz veins and fractures formed during the intrusion of quartz feldspar porphyry and breccia bodies. Alteration zones vary from narrow seams of clay gouge along the margins of individual quartz veins to wide areas of propylitc and argillic alteration around intrusive breccias. Sericite and pyrite are common accessory minerals.

Tertiary and Eocene volcanic rocks unconformably overlie the granitic bodies. These volcanics consist primarily of felsic tuffs, flows and breccias which weather white, yellow or red in colour. Dark green mafic volcanic plugs and dykes cut the felsic units."



#### **PROPERTY GEOLOGY**

Strickland (2010) described the property geology in his 2010 report "<u>Technical Report on the Kirkland Creek Property in Yukon</u>.

The property is mainly underlain by felsic Tertiary volcanic units of the Selkirk Volcanics. A few dykes and sills of basic volcanic rock intrude the sequence. Generally, the volcanic units are flatlying. No granitic or older volcanic rocks are seen but intrusives of the Aishihik Batholith probably underlie the western margin of claim block. Outcrop is limited to a few steep slopes and high ridges; prominent bedrock usually consists of red to light brown highly silicified felsic breccia. Recessive areas contain talus of white to yellow crystal tuff and breccia. The volcanics are rhyolitic to dacitic in composition, containing yellow feldspar phenocrysts. Andesite porphyry dykes and mafic volcanic dykes and sills intrude the felsic volcanics.

Argillic alteration zones containing banded colloform texture jasper occur along linear depressions trending 40°-65°. The alteration zones were formed by hydrothermal circulation through faults and breccia pipes in the volcanic pile. They occasionally contain drusy quartz-chalcedony veinlets but no sulphide minerals were evident.

Structurally, a major northwest trending fault traverses property. Other prominent features a remote sensing image, prepared from satellite data revealed numerous linears and several circular patterns, possibly indicating ring fractures around volcanic centres.

Cretaceous to Tertiary volcanic rocks host lode gold deposits in the Dawson Range. Alteration zones vary from narrow seams of clay gouge along the margins of individual quartz veins to wide areas of propylitc and argillic alteration around intrusive breccias. Sericite and pyrite are common accessory minerals. Deposit types include low tonnage high grade quartz veins such as the Cirque Zone at Mt. Skookurn, and bulk tonnage low grade ore bodies such as Antoniuk at Freegold Mountain

The property lies over a major, deep-seated, North-West trending fracture zone known as the Kirkland Creek fault. This fracture allowed the volcanic complex to rise to the surface and erupt in resurgent stages over a large area measuring approximately 19 x 25 km. The major fracture system, displaying high level epithermal alteration consisting of clay and quartz calcite, crosses the property and continues North-West across a nearby property for a total length of more than 15 kilometers.

The clay alteration cap, which is estimated to be over 250 feet thick and covering approximately 2 square km on surface, directly overlying the target zone, is anomalous in elements such as As, Hg and Cr with elevated base metal values. This is considered to be the result of a large epithermal system underlying the clay alteration cap. The presence of the intact clay cap indicates the potential for the discovery of a non-eroded gold-bearing epithermal system.

## **DEPOSIT TYPES**

Shoshoni Gold Ltd.is exploring for epithermal gold deposits on the Kirkland Creek property. Epithermal gold deposits form at shallower crustal levels than porphyry Copper-Gold systems. The deposits can be divided in to low and high sulphidation based on gangue, ore mineralogy, and interaction of different ore fluids with host rocks and groundwaters. Low sulphidation deposits are in turn further divided according to mineralogy related to the depth and environment of formation, while high sulphidation systems vary with depth and permeability control and are distinguished from several styles of barren acid alteration.

Low sulphidation epithermal Gold + Copper + Silver deposits are divided into two groups those displaying mineralogies derived from magmatic source rocks (arc low sulphidation), and others with mineralogies dominated from circulating geothermal fluid sources (rift low sulphidation).

The former is classed with decreasing crustal level as quartz-sulphide gold + copper, passing to polymetallic gold-silver veins, carbonate-base metal gold and shallowest epithermal quartz gold-silver. These ore types are zoned with shallower styles overprinting the deeper. Low sulphidation adularia-sericite epithermal gold-silver systems comprise the rift low sulphidation style. These are dominated by gangue mineralogies deposited from meteoric water rich circulating geothermal fluids, typically formed in rift settings. Sediment hosted replacement gold deposits are interpreted to develop from low sulphidation fluids in reactive carbonate bearing rocks.

High sulphidation systems are defined by characteristic alteration and mineralization (Corbett and Leach, 1998; Sillitoe, 1999; White and Hedenquist, 1995).

Epithermal veins of the southern Dawson Range, Yukon, are hosted by a wide range of lithologies, ranging from Proterozoic metasedimentary rocks to Late Cretaceous volcanic rocks. Both the 105 Ma calc-alkaline Mount Nansen volcanic group and the 70 Ma shoshonitic Carmacks volcanic group also host small Au-Cu(Mo) porphyry deposits.

Although the structurally-controlled mineralized veins are spatially associated with Mount Nansen feisic dykes. WAR dates for sericitically and argillically altered dykes proximal to rnineralization are -70 Ma. indicating thermal resetting by a Carmacks-age hydrothermal event. These unaltered dykes are depleted in Na. Pb. Zn. and Cu but enriched in As and Sb. relative to unaltered dykes.

The base metal-rich epithermal veins are transitional between classic low and high sulphidation deposit types. (Smuk). 1999)

Gold-rich polymetallic vein deposits, and gold-copper porphyry deposits, occur along a northwesterly trend across the southern Dawson Range. Vein mineralization is hosted by lithologic units ranging from the Proterozoic-Paleozoic. Basement Metamorphic Complex, through the mid-Cretaceous Mt. Nansen volcanics, to the Late Cretaceous Carmacks volcanics.

The mineralized areas also contain numerous porphyry dykes that are spatially associated with gold veins, and historically have been thought to be genetically linked to them. Dykes belonging

to both the Mt. Nansen and Carmacks Groups are present, although Mt. Nansen dykes are the more common. Dykes proximal to mineralized veins are strongly altered to sericite and clay.

Volcanic and subvolcanic rocks of the Mt. Nansen and Carmacks Groups can be distinguished chemically on the basis of their K content; the Mt. Nansen Group is high-K calc-alkaline suite while the Carmacks Group is a shoshonitic suite.

This hydrothermal event appears to have been responsible for much of the mineralization in the southern Dawson Range. Alteration in porphyritic dykes proximal to mineralization is characterized by a strong depletion of Na, reflecting the replacement of feldspar by sericite and clay minerals. Altered dykes also display a general depletion in the ore metals Pb, Zn, and Cu, suggesting that these elements were mobilized from the host rocks during alteration and precipitated in nearby gold-rich base metal veins. As, Sb, and Au, however, appear to have been introduced directly form the hydrothermal fluid. (Smuk, K. A., et al, 1997)

## **MINERALIZATION**

A one gold showing has been identified on the property (see Exploration History section).

**Figure 5: The Epithermal Model** 

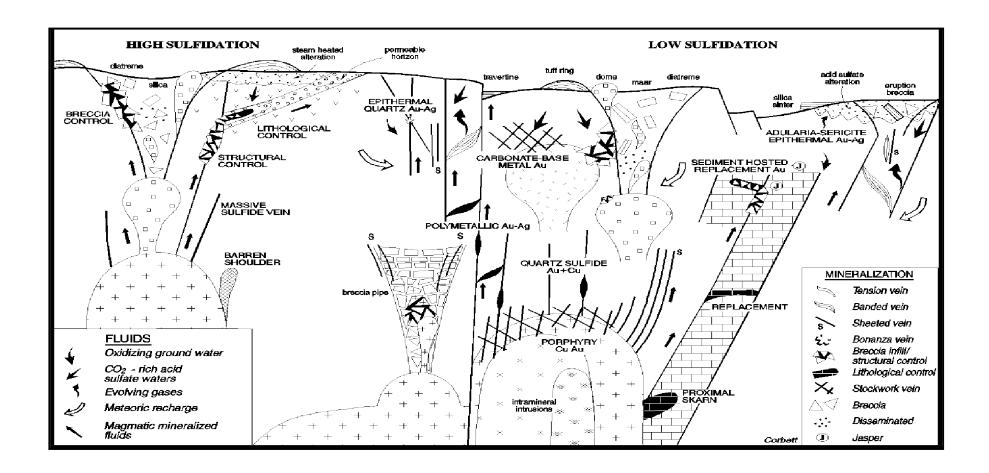


Figure 6: Field Photos from Site Visit: October 8, 2018



Outcrop is limited to a few steep slopes and high ridges; prominent bedrock usually consists of red to light brown highly silicified felsic breccia. The volcanics are rhyolitic to dacitic in composition, containing yellow feldspar phenocrysts.



Despite the evaluating the best information available field operations where challenged by local weather conditions at the site for most of the operating days between October 3 and October 10. Below-freezing temperatures, high winds, snowfall and less than optimal working conditions at the site compromised the UAV equipment (below the recommended minimum operating specifications with high winds), limited outcrop exposure and the ability to make field observations.

## **EXPLORATION**

#### **2018 Field Program Implementation**

While the proposed program was approved in early October 1, 2018. While beyond the generally accepted seasonal window for field work, available weather data indicated a ten-day window of unseasonal weather for the areas of Haines Junction and Carmacks (the two closest weather stations to the Kirkland Creek Property).

Based on this information and confirmed through discussions with helicopter companies active in the region and Shoshoni Gold management, the decision was made to access the property and complete the proposed ten-day program. On October 3, 2018 Iron Mask mobilized technical personnel to Whitehorse

Despite the evaluating the best information available field operations where challenged by local weather conditions at the site for most of the operating days between October 3 and October 10. Below-freezing temperatures, high winds, snowfall and less than optimal working conditions at the site compromised the UAV equipment (below the recommended minimum operating parameters with high winds), limited outcrop exposure and the ability to make field observations.

As a result, data acquisition for approximately two-thirds of the planned UAV Photogrammetry survey area was not achieved. Photogrammetric data acquired over the western third of the property was applicable for digital terrain modelling, however the value of the imagery for establishing baseline environmental data and interpreting geological information was limited by the snow cover.

Prominent outcrops that were not obscured by snowfall were mapped and recorded. However, none of the documented outcrops displayed the propolytic alteration that was the key observation indicating the potential existence of an epi-thermal, precious metal mineralizing system in the vicinity of the Kirkland Creek claims.

Compilation of historic regional and local geological, geophysical, geochemical and geographical information has been initiated and will be completed once the proposed program is concluded.

## **Proposed program completion:**

The completion date for the proposed UAV Photogrammetry program and the digital terrane modelling has been updated to Q2, 2019, once seasonal weather conditions are within the recommended operating ranges for the UAV equipment.

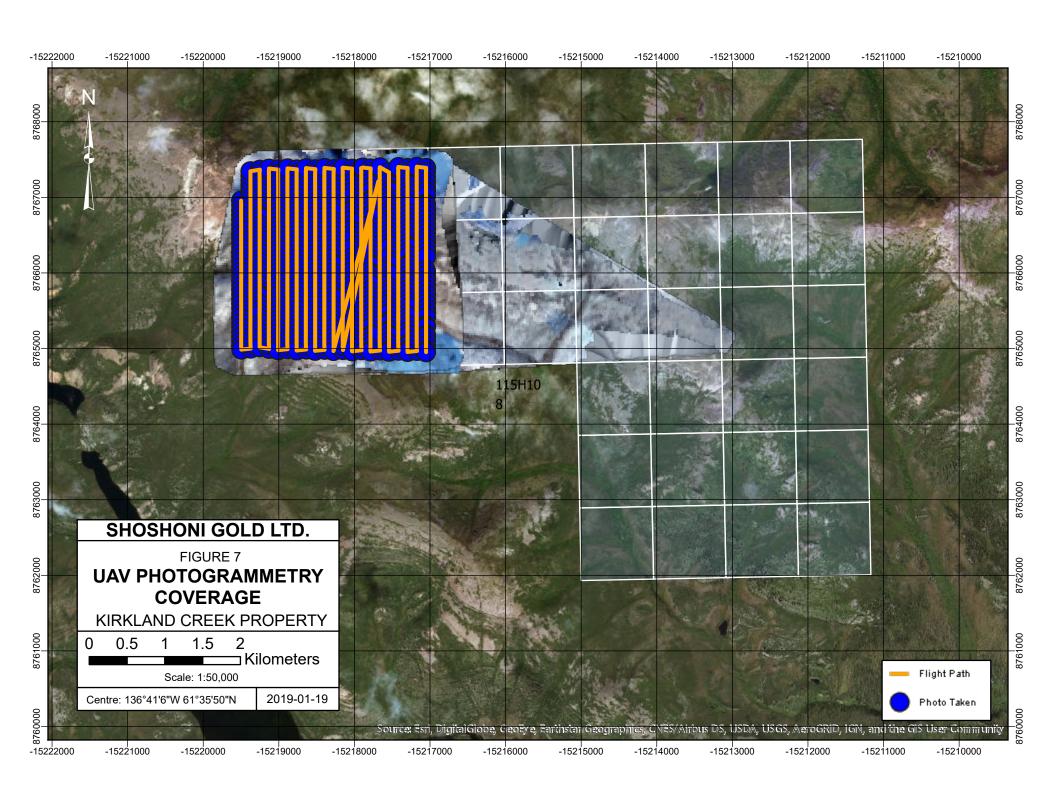
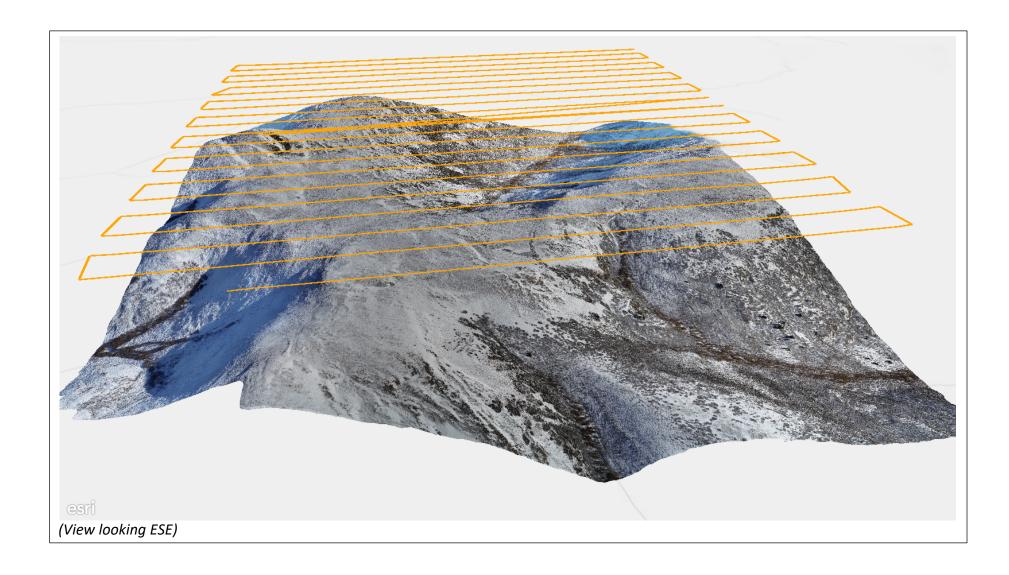


Figure 8: UAV Digital Terrain Model; Perspective View



## **DRILLING**

No drilling was completed as part of the 2018 work program

## SAMPLE PREPARATION, ANALYSES AND SECURITY

No sampling or analyses were completed as part of the 2018 work program

## **DATA VERIFICATION**

No data verification was required as part of the 2018 work program

## MINERAL PROCESSING AND METALLURGICAL TESTING

No mineral processing and metallurgical testing\_ were completed as part of the 2018 work program

## **MINERAL RESOURCE ESTIMATES**

No mineral resources have been identified on the Kirkland Creek property to date

## **ADJACENT PROPERTIES**

There are no existing mineral properties adjacent to the Kirkland Creek property that have generated any material exploration results to impact the potential value or prospectivity of the property.

## **INTERPRETATION AND CONCLUSIONS**

Based on the incomplete 2018 exploration program, the author is unable to draw any specific interpretations or conclusions beyond those documented in the Strickland 2010 report at the time of writing.

## **RECOMMENDATIONS**

Advancing exploration targeting at the Kirkland Creek property is best approached in stages.

Phase 1 of the recommended program is the completion the proposed Photogrammetry survey, compilation of historic and available digital data, and development of a comprehensive, property specific, GIS database.

The benefits gained through the completion of this program include:

- The collection of precise and accurate geographic information system ("GIS") capable of generating base maps for planning and interpretation of exploration data;
- Generations of ortho-photographic data capable of generating detailed topographic, relief, hydrogeology, geomorphology, bedrock exposure and other thematic maps;
- Recover remotely sensed geological, structural geology and lineament analysis;
- Establish current environmental base-line data for land-cover, vegetation, watercourses, and areas of ground disturbance, and;
- Create a comprehensive digital database that would be valuable resource in attracting capital and potential joint venture partners.

Once a comprehensive and property specific GIS database has been developed and reviewed, a decision as to the best approach for a Phase II program can be considered, and, if appropriate, engaged.

Prior to commencing any additional drilling on the property, solutions to address the technical failures experienced during the 2008 drill program, that stemmed from poor penetration and resulted in abandoned holes and missed targets, will need to be identified.

Phase II exploration is recommended to target the epithermal alteration and mineralization associated with underlying porphyry target based on the positive targeting results identified through the completion of Phase I.

See Appendix I for proposed exploration budget details.

## **STATEMENT OF EXPENDITURES**

|                            | Description   | Mob-<br>Demob | Meals &<br>Accom-<br>modation | Field<br>Operations | Data Processing & Compilation | Drafting &<br>Report<br>Writing | Total       |
|----------------------------|---|---------------|-------------------------------|---------------------|-------------------------------|---------------------------------|-------------|
| Mobilization Deobilization | 4 Persons (\$200/per travel day) 4 Persons Return Airfare (Vancouver - Whitehorse)                              | \$1,300.00    |                               |                     |                               |                                 | \$1,300.00  |
| Field Operations           | 3 Field Technicans \$400/day X 6 Days  1 P.Geo (1000/day X 6 days)  1 Phantom 4 Pro Drone (\$75/hour X 9 hours) |               |                               | \$14,925.00         |                               |                                 | \$14,925.00 |
| Compilation & Research     | 1 P.Geo (\$800/day X 10 days)   |               |                               |                     | \$8,000.00                    |                                 | \$8,000.00  |
| Data Processing & Drafting | 1 IT Tech 200 hours @ 75/hour   |               |                               |                     | \$15,000.00                   |                                 | \$15,000.00 |
| Report Writing             | 1 P.Geo (\$800/day X 15 days)   |               |                               |                     |                               | \$12,000.00                     | \$12,000.00 |

| <b>Total Personnel</b> | \$1,300.00 | \$0.00 | \$14,925.00 | \$23,000.00 | \$12,000.00 | \$51,225.00 |
|------------------------|------------|--------|-------------|-------------|-------------|-------------|
|                        |            |        |             |             |             |             |

| Expenses |               | \$5,547.86 | \$5,074.41 | \$14,425.59 | \$0.00 | \$0.00 | \$25,047.86 |
|----------|---------------|------------|------------|-------------|--------|--------|-------------|
|          | Total Expense | \$5,547.86 | \$5,074.41 | \$14,425.59 | \$0.00 | \$0.00 | \$25,047.86 |
|          |               |            |            |             |        |        |             |

 PROJECT TOTAL
 \$6,847.86
 \$5,074.41
 \$29,350.59
 \$23,000.00
 \$12,000.00
 \$76,272.86

Dated at Vancouver, B.C. This 15th day of January, 2019

Andrew Lee Smith, B.Sc., P.Geo., IC

## **CERTIFICATE AND DECLARATION**

### **Qualified Person Declaration**

I, Andrew Lee Smith, B.Sc., P.Geo, ICD.D, do hereby certify as follows:

- I am a consulting geologist, residing at 1582 Chartwell Drive, West Vancouver;
- This certificate applies to the report entitled "Airborne Photogrammetry Survey and Geographic Information System ("GIS") Data Compilation Program, Kirkland Creek Property, Whitehorse Mining District, Yukon, Canada, December 15, 2018";
- I graduated from the University of Waterloo in 1985 with an Hons. B.Sc., Earth Science;
- I am a Practicing Member in good standing of the Association of Professional Engineers, Geologists and Geophysicists of British Columbia since 2000 license 25496
- I have been practising my profession for more than 30 years, exploring, developing, and operating domestic and international base and precious metals mining projects;
- I am a member in good standing of the Institute of Corporate Directors and accredited with the ICD.D designation; an internationally recognized, professional designation for Canadian corporate directors.
- That I am author of the report entitled "Airborne Photogrammetry Survey and Geographic Information System ("GIS") Data Compilation Program, Kirkland Creek Property, Whitehorse Mining District, Yukon, Canada December 15, 2018";
- I visited the property from October 3 to 10, 2018;
- I have been engaged by Shoshoni Gold as an independent contractor and own no direct or indirect interest in Shoshoni Gold or the Kirkland Creek Property;
- I have read the definition of "qualified person" set out in National Instrument 43-101 ("NI 43-101") and certify that by reason of my education, affiliation with appropriate professional associations (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
- I have read National Instrument 43-101, Companion Policy 43-101CP, and form 43-101F, and that this report is in compliance therewith, and;
- As of the date of this certificate, to the best of my knowledge, information and belief, the technical report contains all scientific and technical information that is required to be disclosed to make this technical report not misleading.

Dated at Vancouver, B.C. This 15th January 2019

Andrew Lee Smith, B.Se., P.Goo., ICD.D

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# APPENDIX I: 2019 EXPLORATION BUDGET PROPOSAL KIRKLAND CREEK PROJECT, YUKON

## **PHASE I: Q2 2019**

**Objective**: Completion of the UAV Photogrammetry Survey, Digital Terrane Modelling and GIS Data Compilation Program

| Personnel        | Drone Pilot (\$400/day; 7 days)                      | \$2,800  |
|------------------|--|----------|
|                  | IT Tech (\$400/day; 7 days)                          | \$2,800  |
|                  | Drone Tech/Surveyor (\$400/day; 7 days)              | \$2,800  |
| Mobilization/De- | Personnel (Crew: 3 persons – 2 days)                 | \$2,500  |
| Mobilization     | Travel (Return airfare from Vancouver to Whitehorse) | \$5,000  |
|                  | Meals & Accommodation (\$300/day/person X 21 days)   | \$6,300  |
| Field Expense:   | Equipment Rentals:                                   | \$6,000  |
|                  | Helicopter Support (\$1,500/hr X 2hrs/day X 4 days)  | \$12,000 |
|                  | Drone Fly-time (\$75/hr X 4hrs/day X 4 days)         | \$1,200  |
| Reporting        | Data Processing, Drafting and Compilation            | \$10,000 |
|                  | Research and Reporting                               | \$7,500  |
|                  | Phase I Total  | \$58,900 |

## 2019 EXPLORATION BUDGET PROPOSAL KIRKLAND CREEK PROJECT, YUKON

## **PHASE II: Q3 2019**

**Objective**: Execute a program of geological field work and diamond drilling to advance exploration targeting and confirm the presence of an epithermal mineralizing system, at depth, on the Kirkland Creek property

| Persoonel        | Support Labourers 4 x \$350/man x 10 days          | \$14,000  |
|------------------|--|-----------|
|                  | Geologist 20 days x \$500/day                      | \$10,000  |
|                  | Cook 10 days @ \$350/day                           | \$3,500   |
| Mobilization &   | Camp and Drill from Staging Area                   |           |
| Demobilization   | - Bell 407 10 hrs @ \$2,500/hr                     | \$25,000  |
|                  | - Trucking rig from drill location to staging area | \$10,000  |
|                  | - Crew   | \$75,000  |
|                  | Diamond drill and camp to staging area             |           |
|                  | - Bell 407 10 hrs @ \$2500/hr                      | \$25,000  |
|                  | - Trucking rig from drill location to staging area | \$10,000  |
|                  | - Crew   | \$5,000   |
| Diamond Drilling | 1,000 metres X \$150/m                             | \$150,000 |
| Camp             | Camp Supplies for 10 days                          | \$10,000  |
| Field Expense    | Meals & Accommodation (\$300/day/person X 21 days) | \$6,500   |
|                  | Equipment Rentals:                                 | \$9,000   |
|                  | Helicopter Support (\$1,500/hr X 2hrs/day X 4 days | \$12,000  |
| Assay            | 100 samples @ \$70.00                              | \$49,000  |
| Reporting        | Research, Writing, Drafting Data Processing        | \$15,000  |
|                  | Phase II Total                                     | \$429,000 |

## **APPENDIX II: COPY OF DIGITAL DATA**

## See Data Folder for Digital Data

### **APPENDIX III: PHANTOM 4 PRO SPECIFICATIONS**

#### **AIRCRAFT**

Weight (Battery & Propellers Included) 1388 g

Diagonal Size (Propellers Excluded) 350 mm

Max Ascent Speed S-mode: 6 m/s

P-mode: 5 m/s

Max Descent Speed S-mode: 4 m/s

P-mode: 3 m/s

Max Speed S-mode: 45 mph (72kph)

A-mode: 36 mph (58kph) P-mode: 31 mph (50kph)

Max Tilt Angle S-mode: 42°

A-mode: 35° P-mode: 25°

Max Angular Speed S-mode:250°/s

A-mode: 150°/s

Max Service Ceiling Above Sea Level 19685 feet (6000 m)

Max Wind Speed Resistance 10 m/s

Max Flight Time Approx. 30 minutes

Operating Temperature Range 32° to 104°F (0° to 40°C)

Satellite Positioning Systems GPS/GLONASS

Hover Accuracy Range Vertical:

±0.1 m (with Vision Positioning) ±0.5 m (with GPS Positioning)

Horizontal:

±0.3 m (with Vision Positioning)

±1.5 m (with GPS Positioning)

#### **VISION SYSTEM**

Vision System **Forward Vision System** 

> **Backward Vision System Downward Vision System**

Velocity Range ≤31 mph (50kph) at 6.6 ft (2 m) above ground

Altitude Range 0 - 33 feet (0 - 10 m)

0 - 33 feet (0 - 10 m) **Operating Range** 

**Obstacle Sensory Range** 2 - 98 feet (0.7 - 30 m)

**FOV** Forward: 60°(Horizontal), ±27°(Vertical)

Backward: 60°(Horizontal), ±27°(Vertical)

Downward: 70° (Front and Rear), 50° (Left and Right)

Measuring Frequency Forward: 10 Hz

> Backward: 10 Hz Downward: 20 Hz

**Operating Environment** Surface with clear pattern and adequate lighting (lux>1!

**CAMERA** 

1" CMOS Sensor

Effective pixels: 20M

FOV 84° 8.8 mm/24 mm (35 mm format equivalent) f/2. Lens

f/11 auto focus at 1 m - ∞

**ISO** Range Video:

> 100 - 3200 (Auto) 100 - 6400 (Manual)

Photo:

100 - 3200 (Auto) 100-12800 (Manual)

Mechanical Shutter Speed 8 - 1/2000 s

**Electronic Shutter Speed** 8 - 1/8000 s

**Image Size** 3:2 Aspect Ratio: 5472 × 3648

> 4:3 Aspect Ratio: 4864 × 3648 16:9 Aspect Ratio: 5472 × 3078

PIV Image Size 4096×2160(4096×2160 24/25/30/48/50p)

> 3840×2160(3840×2160 24/25/30/48/50/60p) 2720×1530(2720×1530 24/25/30/48/50/60p) 1920×1080(1920×1080 24/25/30/48/50/60/120p)

1280×720(1280×720 24/25/30/48/50/60/120p)

Still Photography Modes Single Shot

Burst Shooting: 3/5/7/10/14 frames

Auto Exposure Bracketing (AEB): 3/5 bracketed frames a

0.7 EV Bias

Interval: 2/3/5/7/10/15/20/30/60 s

Video Recording Modes H.265

C4K:4096×2160 24/25/30p @100Mbps 4K:3840×2160 24/25/30p @100Mbps 2.7K:2720×1530 24/25/30p @65Mbps 2.7K:2720×1530 48/50/60p @80Mbps FHD:1920×1080 24/25/30p @50Mbps FHD:1920×1080 48/50/60p @65Mbps FHD:1920×1080 120p @100Mbps HD:1280×720 24/25/30p @25Mbps HD:1280×720 48/50/60p @35Mbps HD:1280×720 120p @60Mbps

H.264

C4K:4096×2160 24/25/30/48/50/60p @100Mbps 4K:3840×2160 24/25/30/48/50/60p @100Mbps

2.7K:2720×1530 24/25/30p @80Mbps 2.7K:2720×1530 48/50/60p @100Mbps FHD:1920×1080 24/25/30p @60Mbps FHD:1920×1080 48/50/60 @80Mbps FHD:1920×1080 120p @100Mbps HD:1280×720 24/25/30p @30Mbps HD:1280×720 48/50/60p @45Mbps HD:1280×720 120p @80Mbps

Max Video Bitrate 100 Mbps

Supported File Systems FAT32 (≤32 GB); exFAT (>32 GB)

Photo JPEG, DNG (RAW), JPEG + DNG

Video MP4/MOV (AVC/H.264; HEVC/H.265)

Supported SD Cards Micro SD

Max Capacity: 128GB

Write speed ≥15MB/s, Class 10 or UHS-1 rating requirec

Operating Temperature Range 32° to 104°F (0° to 40°C)

**CHARGER** 

Voltage 17.4 V

Rated Power 100 W

**APP / LIVE VIEW** 

Mobile App DJI GO 4

Live View Working Frequency 2.4 GHz ISM, 5.8 GHz ISM

Live View Quality 720P @ 30fps

Latency Phantom 4 Pro: 220 ms (depending on conditions and

mobile device)

Phantom 4 Pro + : 160 - 180 ms

Required Operating Systems iOS 9.0 or later

Android 4.4.0 or later

**GIMBAL** 

Stabilization 3-axis (pitch, roll, yaw)

Controllable Range Pitch: -90° to +30°

Max Controllable Angular Speed Pitch: 90°/s

Angular Vibration Range ±0.02°

**INFRARED SENSING SYSTEM** 

Obstacle Sensory Range 0.6 - 23 feet (0.2 - 7 m)

FOV 70° (Horizontal), ±10° (Vertical)

Measuring Frequency 10 Hz

Operating Environment Surface with diffuse reflection material, and reflectivity

8% (such as wall, trees, humans, etc.)

**REMOTE CONTROLLER** 

Operating Frequency 2.400 - 2.483 GHz and 5.725 - 5.825 GHz

Max Transmission Distance 2.400 - 2.483 GHz (Unobstructed, free of interference)

FCC: 4.3 mi (7 km) CE: 2.2 mi (3.5 km) SRRC: 2.5 mi (4 km)

5.725 - 5.825 GHz (Unobstructed, free of interference)

FCC: 4.3 mi (7 km) CE: 1.2 mi (2 km) SRRC: 3.1 mi (5 km) Operating Temperature Range 32° to 104°F (0° to 40°C)

Battery 6000 mAh LiPo 2S

Transmitter Power (EIRP) 2.400 - 2.483 GHz

FCC: 26 dBm CE: 17 dBm SRRC: 20 dBm MIC: 17 dBm 5.725 - 5.825 GHz FCC: 28 dBm CE: 14 dBm SRRC: 20 dBm

MIC: -

Operating Current/Voltage 1.2 A@7.4 V

Video Output Port GL300E: HDMI

GL300F: USB

Mobile Device Holder GL300E: Built-in display device (5.5 inch screen,

1920×1080, 1000 cd/m<sup>2</sup>, Android system, 4 GB RAM+1

GB ROM)

GL300F: Tablets and smart phones

#### **INTELLIGENT FLIGHT BATTERY**

Capacity 5870 mAh

Voltage 15.2 V

Battery Type LiPo 4S

Energy 89.2 Wh

Net Weight 468 g

Charging Temperature Range 41° to 104°F (5° to 40°C)

Max Charging Power 160 W