11-066

YEIP 2011 -066

# EVALUATION REPORT on the NINES CREEK PROJECT

Nines 31 to 78 (P 50506-P 50557) Prospecting Lease (IW00285)

# NTS: 115G/02

# Latitude 61° 10' 53" Longitude 138° 42' 11"

# Whitehorse Mining District

Work performed between September 25 - 27, 2008 and August 21 – September 9, 2009 April 31 – September 16, 2010

> For Ralph Keefe P.O. Box 201 Francois Lake, British Columbia V0J 1R0

Ken Galambos, P.Eng. KDG Exploration Services 1535 Westall Ave. Victoria, British Columbia V8T 2G6

January 31, 2011

## **1.0 EXECUTIVE SUMMARY**

Weather played a large factor in determining the amount of work that was accomplished evaluating the placer potential for Nines Creek in 2010. A late spring and high snow conditions in the catchment area resulted in the creek staying at high levels for the entire season. Heavy rains during July and August added to the high water and stopped access for foot travel and at times made stream crossing by Argo dangerous. No attempt was made with 4 wheel ATVs for safety reasons.

As a result of the access problems, the contract with Arctic Geosciences of Dawson City, to conduct resistivity surveys on Nines Creek and magnetic surveys on the south fork of Nines Creek, was postponed until 2011.

Traverses were completed to determine possible access to the wide area of gravels and the magnetic anomalies located above the canyon. Initial investigation of the surface gravels was completed at various points on the south fork of Nines Creek to satisfy Placer Mining Act requirements. Approximately 3746 cubic meters of trenching were completed with 2 excavators late in the season to determine potential mining grades however the onset of sub zero weather eliminated any sampling efforts for 2010.

This season's efforts were a follow up of a Total Magnetic Field survey completed during 2009. This survey revealed magnetic high anomalies both above and below the upper and lower canyon area which could be related to the alluvial environment and may represent concentrations of placer magnetite. Placer gold is often concentrated in the same area due to its high specific gravity. The largest flake of placer gold (16.6mg) collected by the author was from a one bucket sample of mixed gravels located on bedrock approximately 500m below Nines 31. The sample was from the far right limit of the creek, well above the active creek channel.

The largest amount of gold collected during the 2008 sampling program weighed 2.6mg from a 2.13m (7') deep pit that did not reach bedrock located on Nines 32. Pan concentrates yielded up to 4.02g/t gold from the Lower Canyon high grade (LC-HG) sample.

It is the author's opinion that the work completed on the Nines Creek property registered to Ralph Keefe indicates that it is a placer gold property worthy of further exploration.

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## 2.0 INTRODUCTION AND TERMS OF REFERENCE

## 2.1 Qualified Person and Participating Personnel

Mr. Kenneth D. Galambos, P.Eng. was commissioned by Ralph Keefe of Francois Lake, British Columbia to examine and evaluate the traditional placer gold potential and the gold content contained in the magnetite and other heavy minerals present in the creek gravels on the Nines Creek Project and to make recommendations for the next phase of exploration work in order to test the economic potential of the property. The author did not participate in the field work on Nines Creek in 2010, but did considerable work arranging contractors to complete the geophysical and physical trenching programs on the project.

This report describes the property in accordance with the guidelines specified in National Instrument 43-101 and is based on historical information and an examination and evaluation of the property by the author from September 25 to 27, 2008. The author was assisted in the field in 2008 by Mr. Ralph Keefe of Francois Lake, British Columbia. Subsequent programs conducted during the summer of 2009 entailed the services of Bob Sterling, an independent geophysical contractor and Ralph Keefe to complete a magnetic survey planned by the author. This was followed by a small prospecting program by Mr. Keefe to evaluate the hard rock potential of the area. The 2010 program included the services Gordy's Excavating of Whitehorse and Chuck Exploration of Destruction Bay for the trenching. Ralph Keefe of Francois Lake, BC, Bruce McMillan and Bradley Schmidt both of Whitehorse were involved in the general exploration and testing on the north and south forks of Nines Creek. Stefan Ostermaier of Arctic Geophysics of Dawson City spent one night on the creek to evaluate the field conditions for conducting geophysical surveys with the high water. A decision was made at that time to postpone the program for safety reasons until the 2011 season.

## 2.2 Terms, Definitions and Units

- All costs contained in this report are denominated in Canadian dollars.
- Distances are primarily reported in metres (m) and kilometers (km) and in feet (ft) when reporting historical data.
- Volumes are expressed as bank cubic yards (bcy) which is the in-situ volume and loose cubic yards (lcy), the disturbed volume of material that is typically sampled.
- GPS refers to global positioning system.
- Minfile showing refers to documented mineral occurrences on file with the Yukon Geological Survey.
- The term ppm refers to parts per million, equivalent to grams per metric tonne (gm/t).
- ppb refers to parts per billion. 1000ppb is equivalent to 1 gm/t.
- The abbreviation oz/t refers to troy ounces per imperial short ton.
- The symbol % refers to weight percent unless otherwise stated. 1% is equivalent to 10,000ppm.

• Elemental and mineral abbreviations used in this report include: gold (Au), pyrite (Py) and chalcopyrite (Cpy).

## 2.3 Source Documents

Sources of information are detailed below and include the available public domain information and private company data.

- Research of the Minfile data available for the area at <u>http://www.geology.gov.yk.ca/</u>
- Research of mineral titles at <u>http://www.yukonminingrecorder.ca/</u>
- Review of company reports and annual assessment reports filed with the government at <u>http://emr.gov.yk.ca/library/</u>
- Review of geological maps and reports completed by the Yukon Geological Survey or its predecessors.
- Published scientific papers on the geology and mineral deposits of the region and on mineral deposit types.
- The author has previous independent experience and knowledge of the regional area having worked on the Frypan Creek property now registered to 41783 Yukon Inc. and having conducted regional exploration throughout the belt for Hudson Bay Exploration and Development Ltd. and Noranda Exploration Ltd. NPL.
- Work on the property by the author from September 25 to 27, 2008 and by Keefe and Sterling, August 22 to 28, 2009 and by Keefe et al April 27 to September 16, 2010.
- A review of the 2D geophysical survey method to map the bedrock/gravel interface can be found on the Arctic Geophysics website at <u>http://www.arctic-geophysics.com/</u>

## 2.4 Limitations, Restrictions and Assumptions

The author has assumed that the previous documented work in the area of the property is valid and has not encountered any information to discredit such work.

## 2.5 Scope

This report describes the current exploration programs, geology, previous exploration history and mineral potential of the Nines Creek Project. Research included a review of the historical work that related to the immediate and surrounding area of the property. Regional geological data and current exploration information have been reviewed to determine the geological setting of the mineralization and to obtain an indication of the level of industry activity in the area. The property was examined and originally evaluated by the author in late September, 2008 after the staking of the 5 mile placer lease by Mr. Keefe. Work consisted of limited geological mapping, rock and geochemical sampling of the heavy minerals in the creek. Following up on this initial visit, the owner of the property conducted geophysical surveys in 2009 and converted the 5 mile lease to claims. Once the claims were accepted at the Whitehorse Mining Recorder's office, Mr. Keefe returned to the area to stake an additional 2 mile lease on the south fork of Nines Creek. In 2010, an extensive trenching program was

completed in an effort to determine the potential grade of the gravels. The onset of winter conditions precluded the sampling of any of the stockpiled gravels. Initial sampling of the surface gravels was completed on the 2 mile lease on the south fork of Nines Creek.

#### **3.0 RELIANCE ON OTHER EXPERTS**

Some data referenced in the preparation of this report was compiled by geologists employed by the Yukon Geological Survey including its predecessor and the Geological Survey of Canada, both prior to and after the inception of National Instrument 43-101. These individuals would be classified as "qualified persons" today, although that designation may not have existed when some of the historic work was done. The author assumes no responsibility for the interpretations and inferences made by these individuals prior to the inception of the "qualified person" designation.

#### 4.0 PROPERTY DESCRIPTION AND LOCATION

#### 4.1 Location and Access

The Nines Creek project area lies on the south side of Kluane Lake in the Kluane Game Sanctuary. The centre of the area lies approximately 25 km SE of the community of Burwash Landing, Yukon on mapsheets 115G02 and 115G07. The property is accessed through a Government

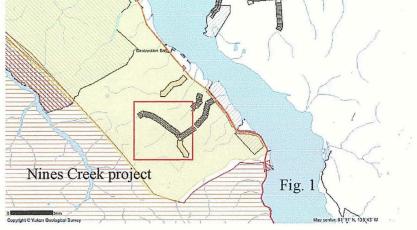


Fig. 1 Claim location map

gravel pit with a two-wheel drive trail at a point approximately 8km southeast of the community of Destruction Bay, Yukon. The claims lie in the Whitehorse Mining District and are administered out of Whitehorse, Yukon.

#### 4.2 Physiography and Vegetation

Nines Creek lies within the St. Elias Mountains in south western Yukon. The majority of the property has a moderate grade while the property is confined to a fairly tight creek channel.



Plate 1: 2wd access road to the project

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The creek channel is essentially barren with low scrub encroaching into the creek banks. Below the property and once the creek has exited the front ranges, it has deposited significant quantities of gravel in a large alluvial fan deposit. The width of the fan where it exits the gulch is roughly 80m and from air photo interpretation the fan reaches a width in excess of 3km on the shores of Kluane Lake a distance in excess of 5km. Much of this area is barren with only scattered clumps of low shrubs and isolated trees. In areas of heavier vegetation, spruce and cottonwood predominated with alder and willow common in the wetter areas.

#### 4.3 Land Tenure

The Nines Creek claim group consists of fifty-two contiguous placer claims and a 2-mile Placer Prospecting Lease located in the Whitehorse Mining District. The claims were staked by Ralph Keefe.

#### Table 1: Claim Data

ClaimName	Claim#	GrantNumber	Claim Owner	RecordingDate	ExpiryDate
NINES	31	P 50506	Ralph Keefe - 100%.	9/1/2009	9/1/2011
NINES	32	P 50507	Ralph Keefe - 100%.	9/1/2009	9/1/2011
NINES	33	P 50508	Ralph Keefe - 100%.	9/1/2009	9/1/2011
NINES	34	P 50509	Ralph Keefe - 100%.	9/1/2009	9/1/2011
NINES	35	P 50510	Ralph Keefe - 100%.	9/1/2009	9/1/2011
NINES	36	P 50511	Ralph Keefe - 100%.	9/1/2009	9/1/2011
NINES 36A		P 50512	Ralph Keefe - 100%.	9/1/2009	9/1/2011
NINES 36B		P 50513	Ralph Keefe - 100%.	9/1/2009	9/1/2011
NINES 36C		P 50514	Ralph Keefe - 100%.	9/1/2009	9/1/2011
NINES 36D		P 50515	Ralph Keefe - 100%.	9/1/2009	9/1/2011
NINES	37	P 50516	Ralph Keefe - 100%.	9/1/2009	9/1/2011
NINES	38	P 50517	Ralph Keefe - 100%.	9/1/2009	9/1/2011
NINES	39	P 50518	Ralph Keefe - 100%.	9/1/2009	9/1/2011
NINES	40	P 50519	Ralph Keefe - 100%.	9/1/2009	9/1/2011
NINES	41	P 50520	Ralph Keefe - 100%.	9/1/2009	9/1/2011
NINES	42	P 50521	Ralph Keefe - 100%.	9/1/2009	9/1/2011
NINES	43	P 50522	Ralph Keefe - 100%.	9/1/2009	9/1/2011
NINES	44	P 50523	Ralph Keefe - 100%.	9/1/2009	9/1/2011
NINES	45	P 50524	Ralph Keefe - 100%.	9/1/2009	9/1/2011
NINES	46	P 50525	Ralph Keefe - 100%.	9/1/2009	9/1/2011
NINES	47	P 50526	Ralph Keefe - 100%.	9/1/2009	9/1/2011
NINES	48	P 50527	Ralph Keefe - 100%.	9/1/2009	9/1/2011
NINES	49	P 50528	Ralph Keefe - 100%.	9/1/2009	9/1/2011
NINES	50	P 50529	Ralph Keefe - 100%.	9/1/2009	9/1/2011
NINES	51	P 50530	Ralph Keefe - 100%.	9/1/2009	9/1/2011
NINES	52	P 50531	Ralph Keefe - 100%.	9/1/2009	9/1/2011
NINES	53	P 50532	Ralph Keefe - 100%.	9/1/2009	9/1/2011
NINES	54	P 50533	Ralph Keefe - 100%.	9/1/2009	9/1/2011
NINES	55	P 50534	Ralph Keefe - 100%.	9/1/2009	9/1/2011
NINES	56	P 50535	Ralph Keefe - 100%.	9/1/2009	9/1/2011
NINES	57	P 50536	Ralph Keefe - 100%.	9/1/2009	9/1/2011
NINES	58	P 50537	Ralph Keefe - 100%.	9/1/2009	9/1/2011
NINES	59	P 50538	Ralph Keefe - 100%.	9/1/2009	9/1/2011

NINES	60	P 50539	Ralph Keefe - 100%.	9/1/2009	9/1/2011
NINES	61	P 50540	Ralph Keefe - 100%.	9/1/2009	9/1/2011
NINES	62	P 50541	Ralph Keefe - 100%.	9/1/2009	9/1/2011
NINES	63	P 50542	Ralph Keefe - 100%.	9/1/2009	9/1/2011
NINES	64	P 50543	Ralph Keefe - 100%.	9/1/2009	9/1/2011
NINES	65	P 50544	Ralph Keefe - 100%.	9/1/2009	9/1/2011
NINES	66	P 50545	Ralph Keefe - 100%.	9/1/2009	9/1/2011
NINES	67	P 50546	Ralph Keefe - 100%.	9/1/2009	9/1/2011
NINES	68	P 50547	Ralph Keefe - 100%.	9/1/2009	9/1/2011
NINES	69	P 50548	Ralph Keefe - 100%.	9/1/2009	9/1/2011
NINES	70	P 50549	Ralph Keefe - 100%.	9/1/2009	9/1/2011
NINES	71	P 50550	Ralph Keefe - 100%.	9/1/2009	9/1/2011
NINES	72	P 50551	Ralph Keefe - 100%.	9/1/2009	9/1/2011
NINES	73	P 50552	Ralph Keefe - 100%.	9/1/2009	9/1/2011
NINES	74	P 50553	Ralph Keefe - 100%.	9/1/2009	9/1/2011
NINES	75	P 50554	Ralph Keefe - 100%.	9/1/2009	9/1/2011
NINES	76	P 50555	Ralph Keefe - 100%.	9/1/2009	9/1/2011
NINES	77	P 50556	Ralph Keefe - 100%.	9/1/2009	9/1/2011
NINES	78	P 50557	Ralph Keefe - 100%.	9/1/2009	9/1/2011
		IW00285	Ralph Keefe - 100%.	9/10/2009	9/10/2011

#### **5.0 HISTORY**

Only limited exploration has been completed on Nines Creek prior to 2008. The area was initially withdrawn from staking during the time leading up to the creation of Kluane National Park in 1972 and again prior to the settlement of the Kluane First Nations Final Agreement on October 18, 2003. The area was open for development for a brief time during the late 1980s as evidenced by old claim posts near the lower canyon on Nines Creek. Claim tags revealed the creek had

been staked by William M. Blahitka and recorded as Frija with tenure # P 27510 on August 26, 1988. The claim expired the following year without any work being filed for assessment. The alluvial fan on Nines Creek had also been tested by a local **Destruction Bay equipment** operator at one point as well, with only a few colors being recovered. (pers com). The surface gravels of the lower Nines Creek alluvial fan target was also systematically evaluated in September of 2008 by Nines Creek Gold Corp. In 2008, Mr. Ralph Keefe staked a



Plate. 2: Historic claim post from 1988

five mile lease on the upper Nines Creek and subsequently converted to the

lease to claims following initial prospecting and magnetic geophysical surveys completed in 2009.

#### 6.0 GEOLOGICAL SETTING

#### 6.1 Regional Geology

The bedrock geology in the area is as follows:

#### **NW1: WRANGELL LAVAS**

rusty red-brown, phyric and non-phyric basaltic andesite flows (minor pillow lava), interbedded with felsic tuff, volcanic sandstone and conglomerate; acid pyroclastics related to intra-Wrangell intrusions; thin basaltic andesite and andesite flows (Wrangell Lavas)

#### **MW: WRANGELL SUITE**

fine to medium grained, hornblende +/- biotite granodiorite and porphyritic (K-feldspar) hornblende granodiorite; medium grained, uniform biotite diorite and pyroxene gabbro; subvolcanic hornblende +/- biotite rhyolite, rhyodacite, dacite, and trachyte (Wrangell Suite)

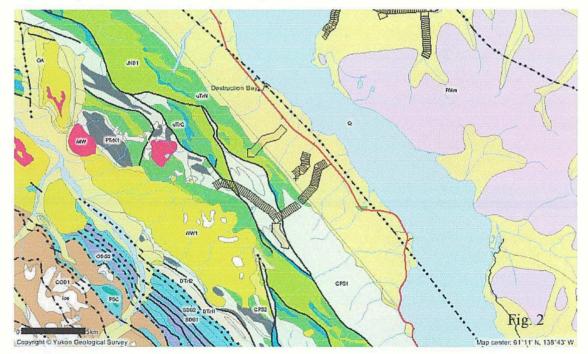


Fig. 2: Regional Geology

#### **CPS1: SKOLAI**

volcanics succeeded upward by clastic strata, tuff, breccia, argillite, agglomerate, augite-phyric basaltic to andesitic flows (Station Cr. Fm); succeeded by thin-bedded argillite, siltstone, minor greywacke and

conglomerate and local thin basaltic flows, breccia and tuff (Hasen Cr. Fm) (Skolai Gp., Station Creek and Hasen Creek)

## JKD1: DEZADEASH

interbedded light to dark buff-grey lithic greywacke, sandstone, siltstone, thin dark grey shale, argillite, phyllite and conglomerate; rare tuff **(Dezadeash)** 

#### uTrC: CHITISTONE

thin interbedded light to dark grey argillaceous limestone and dark grey argillite; massive light grey limestone, limestone breccia and darker grey, well-bedded limestone; white to creamy-white gypsum and anhydrite (McCarthy, Chitistone and Nizina limestones)

#### uTrN: NICOLAI

amygdaloidal basaltic and andesitic flows, with local tuff, breccia, shale and thin-bedded bioclastic limestone; volcanic breccia, pillow lava and conglomerate at base; locally includes dark grey phyllite and minor thin grey limestone of Middle Triassic (Nicolai Greenstone)

#### PTrK1: KLUANE ULTRAMAFIC SUITE

medium grey-green, massive, medium grained, pyroxene gabbro and greenstone sills; sheeny black peridotite, rare dunite (Kluane-type Mafic-Ultramafics; Squaw Datlasaka Ranges Gabbro-Diabase Sills)

#### 6.2 Property Geology

The placer claims comprising the Nines Creek property overlie only a few of the regionally present units but the alluvial deposits are composed of a mix of most of the rocks in the area including a few erratic boulders of granitic composition. Rocks that have been mapped in the immediate area include:

#### CPS1: SKOLAI

volcanics succeeded upward by clastic strata, tuff, breccia, argillite, agglomerate, augite-phyric basaltic to andesitic flows (Station Cr. Fm); succeeded by thin-bedded argillite, siltstone, minor greywacke and conglomerate and local thin basaltic flows, breccia and tuff (Hasen Cr. Fm) (Skolai Gp., Station Creek and Hasen Creek)

#### JKD1: DEZADEASH

interbedded light to dark buff-grey lithic greywacke, sandstone, siltstone, thin dark grey shale, argillite, phyllite and conglomerate; rare tuff **(Dezadeash)** 

#### uTrN: NICOLAI

amygdaloidal basaltic and andesitic flows, with local tuff, breccia, shale and thin-bedded bioclastic limestone; volcanic breccia, pillow lava and conglomerate at base; locally includes dark grey phyllite and minor thin grey limestone of Middle Triassic (Nicolai Greenstone)

## 7.0 DEPOSIT TYPES

## 7.1 Gulch Placers

Gulch placers are very high energy lag systems that exist in confined drainages. As with all lag deposits, they are poorly sorted and contain angular to subrounded particles ranging from silt to boulder in size. Boulder clusters exist within the drainage and protect poorly sorted material which acts like natural riffles that collect gold particles. The deposits can be quite rich, but may be spotty with localized concentrations of gold. Pay zones are typically narrow and range from a few inches to several feet and are normally located at or near bedrock or false bedrock within the sediment package. The source for the gold particles is quite close and the deposit forms more from the removal of lighter material than the lengthy transportation of the heavy minerals. Gold particles in a pure gulch placer will exhibit little rounding or folding and tend to be crystalline, flat, wire or shot like as found in the lode source.

## 7.2 Glacial Placers

Glacial movement tends to smear any existing placer or lode deposits in a down ice direction and generally results in poorly sorted moraine containing abundant clay or rock flour. The glacial deposits rarely concentrate any heavy minerals and can often bury existing gulch placers beneath barren sediments. Placer deposits that form from gold bearing glacial sediments are typically gulch and alluvial deposits that have formed from the reworking of these glacial sediments.

## 7.3 Volcanic Massive Sulphide Deposits

The primary model suggested by Steve Israel of the Yukon Geological Survey for the mineralization found on the Nines Creek property is that of a volcanic massive sulphide deposit. Examples in similar settings would include the Besshi deposits in Japan, Windy Craggy located in British Columbia and Greens Creek deposit in Alaska. Noranda/Kuroko type VMS deposits found in similar terranes include Tulsequah Chief, Kutcho Creek and Myra Falls in British Columbia.

Israel has noted VMS style mineralization in the Lower Station Creek formation volcanic rocks which have returned a 320 Ma age which coincides with VMS mineralization that has recently been found in the upper portion of the Sicker Arc on Vancouver Island. Massive magnetite deposits and magnetite-bearing jasper form as exhalative lenses up to a metre thick and several tens of metres in strike length elsewhere in the Station Creek basalts.

The Besshi type deposits generally form as thin sheets of massive to well layered iron sulphides (pyrrhotite and or pyrite) with chalcopyrite, sphalerite and minor galena interlayered terrigenous clastic rocks and calcalkaline mafic to intermediate tuffs and flows. The deposits generally form in extensional

environments such as back-arc basins, rift basins in the early stages of continental separation and oceanic ridges proximal to continental margins. Deposits are generally a few metres thick and up several kilometers in strike length and down dip though they can occur as stacked lenses. Primary mineralization generally consists of pyrite, pyrrhotite, chalcopyrite, sphalerite, cobaltite, magnetite, galena, bornite, tetrahedrite, cubanite, stannite, molybdenite, arsenopyrite and marcasite. As such, copper, gold, silver, zinc and lead are the main commodities found in Besshi type deposits although the relative amounts of each mineral may vary widely. Alteration generally consists of quartz, chlorite, calcite, siderite, ankerite, pyrite, sericite and graphite.

The grade and tonnage potential for these types of deposits varies considerably from an average of 0.22Mt, containing 1.5% Cu, 2-9g/t Ag and 0.4-2% Zn for the type-locality Besshi deposits to the very large Windy Craggy deposit which has reserves of more that 113.0 Mt containing 1.9% Cu, 3.9 g/t Ag and 0.08% Co. (Cox and Singer, 1986).

Associated deposit types are generally confined to Cu and Zn veins.

## 8.0 MINERALIZATION

Discussion of mineralization on the property is confined to placer gold. There has been no attempt made to determine the purity of the placer gold collected to date. Nines Creek is known to contain grains of placer gold in as yet undetermined concentrations. The recovered gold from the property ranges in size from very small flakes up to 2.6mg in size. The largest flake recovered on the creek to date weighed 16.6mg and was collected by the author from a one bucket sample of mixed gravels located on bedrock approximately 500m below Nines 31. This sample was collected well above the grade of the present creek level and would be considered "side pay".

## 9.0 PREVIOUS EXPLORATION

Only limited exploration has been completed on Nines Creek prior to 2008. The area was open for development for a brief time during the late 1980s as evidenced by old claim posts near the lower canyon on Nines Creek. Claim tags revealed the creek had been staked by William M. Blahitka and recorded as Frija with tenure # P 27510 on August 26, 1988. The claim expired the following year without any work being filed for assessment. The alluvial fan on Nines Creek had also been tested by a local Destruction Bay equipment operator at one point as well, with only a few colors being recovered. (pers com). The surface gravels of the lower Nines Creek alluvial fan target was also systematically evaluated in September of 2008 by Nines Creek Gold Corp.

In September, 2008 the Nines Creek property owned by Ralph Keefe was evaluated using a backhoe test pitting program of the creek gravels. A surface

magnetic survey was completed on the claims in 2009 in an attempt to map alluvial concentrations of magnetite. This would also be the preferred environment for the deposition of minerals with high specific gravities including gold. The 2009 evaluation program consisted of the establishment of a picketed grid over the lower half of the Nines Creek property to facilitate the collection of magnetic survey data in an attempt to locate concentrations of alluvial magnetite. Placer gold is often associated with magnetite and other minerals of high specific gravity. Locating any magnetic high anomalies in the alluvial environment would focus any further evaluation surveys and test pitting contemplated for the property. A total of 8.5 line km of survey was completed using stations with 5m separation along lines spaced 20m apart.

## 9.1 Placer Sampling Method and Approach

Sampling of potentially gold bearing placer gravels in 2008 remained consistent throughout the exploration program with the exception of samples collected in the lower canyon area. Here, two one-bucket samples were collected and panned on site to eliminate the transportation of the larger sample over rough ground by foot to the ATV located approximately 100m distance.



Plate 3: Sample site below canyon



Plate 4: Excavator used in 2008 sampling program

All other test sites were dug with a small excavator. At each test site, the operator was instructed to deposit a representative, top to bottom, section of gravel to be further processed by the author. A two bucket, 0.053 loose cubic yard (lcy) screened sample, was then collected from this material. Material collected for processing passed through an expanded metal screen with an opening size of 1.6 x  $3.8 \text{ cm} (5/8" \times 11/2")$ .

Oversize was separated into cobble and boulder fractions and estimates were made as to the % of each fraction present. Photographs were taken of each test hole to record the relative size of each hole, the gravels present and any unique features such as tree trunks or peat moss present in the test pit. Photographs

were also taken of the distribution of gravel/cobble/boulder present at each site. The weight of each sample averaged 77.339kg (170.5 lbs). Each two bucket sample was then transported by an all terrain vehicle (ATV) to the processing trailer for further concentration. Sluice concentrates were then further concentrated by panning and larger gold grains removed for weighing. Test pits were filled in prior to the end of the program and the area returned to as close to its natural condition as possible.



Plate 5: Example of 2008 sample site

## 9.2 Sample Preparation, Analysis and Security

A processing site was set up on claim Nines 21 where water was available for a small sluice box which was used to concentrate each sample. The sluice was set at an industry standard slope of 1½" of drop per foot of run to collect the majority of the heavy minerals present. After each sample was shoveled through the sluice, the matting and screens were totally dismantled from the box, washed to remove the concentrate and then reinstalled. The concentrate was then collected in a heavy-weight plastic sample bag. Each sample was double



Plate 6: Processing 2-bucket sample

labeled with a small piece of flagging tape inside each bag and with a permanent marker on the outside of the sample bag. The sample was then double bagged to ensure there was no loss of material in case of accidental breakage of the first. The average weight of concentrate collected from each sample was 5.44kg (12 lbs).

After initial concentration of the Nines Creek samples, concentrates were transported to a secure facility and further concentrated to a weight of approximately 100g using a gold wheel and final panning of the heavy minerals. Any recoverable gold was removed at this time and placed into individual 1 dram

glass vials which were then labeled with permanent marker as to their respective sample number. These physical gold samples were delivered to Research Consulting Center, a subsidiary of M Quest Capital Corp. for weighing and further testing. The concentrates were transported to Acme Analytical Laboratories, an independent company, and submitted for P200 preparation (Dry at 60°C and

pulverize only to 85% passing 200 mesh) and G6 analysis (fire assay for gold using 30g sample).

## 9.3 Sample Results

Sampling of the Nines Creek gravels resulted in visible gold being present in 5 of 6 samples collected. Of the samples with recoverable gold, only 2 of the samples had weighable gold. The weight of the largest flakes recovered was 2.6mg from sample N32.1. The weights of the recovered gold are reported in



Plate 7: Large flakes of placer gold

Appendix A. Assaying of the sample concentrates returned values as high as



Plate 8: Final processing of sample concentrates

4.02g/t gold. Assay results of the sample concentrates are reported in Appendix B.

# 9.4 Geophysical Survey Method and Approach

A total of 8.5 line km of survey was completed at Nines Creek in 2009. A picketed baseline was established as control for the magnetic survey. Ends of cross lines were marked with pickets and flagging tape. Readings were collected every 5m on lines spaced 20m apart over the creek bed. Two areas were surveyed in detail

both above and below a series of canyons located on the creek. The canyon area could not be grid surveyed and was evaluated with a single profile line the length of the lower canyon. Readings were taken every 5m. A GEM Systems GSM 19T proton magnetometer was used for the base station with readings taken every 3 seconds. The mobile unit consisted of a GEM Systems GSM 19 TW proton magnetometer. Mobile stations were read in immediate mode with interpolation. Details on the survey methods are reported in Appendix C.

## 9.5 Geophysical Results

A number of anomalies were located during the survey which may indicate alluvial magnetite and possible locations where placer gold may accumulate. The profile line through the canyon identified an area of high magnetism which is likely related to bedrock. Layers of massive magnetite and hematite cross the creek and may be the source for some of the magnetite present in the creek gravels.

#### Anomaly A

A magnetic high anomaly was found above the canyon on lines 61 to 85. Bedrock was not observed in this area. The left and right limit valley slopes consist of alluvial till and/or glacial outwash and slide rock. Anomaly A may be related to the alluvial environment as the width of the active channel decreases considerably causing the water velocity to slow before entering the canyon.

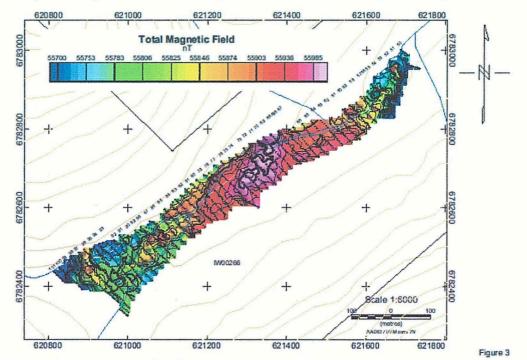


Fig. 3: Magnetic survey results above canyon on Nines Creek.

Government geologists have mapped a fault crossing the creek in the area of the magnetic anomaly and it has been suggested that the fault may be the source of the magnetic anomaly. Geophysical maps do not show any magnetic high features at this location and a second theory is that the faulted bedrock has acted as natural riffles and concentrated the magnetite and other heavy minerals at this location. The trend of the magnetic anomaly suggests that it heads southwest and eventually under the till covered bank, possibly preserving any accumulation of heavy minerals present.

#### Anomaly B

A moderate to high magnetic anomaly was found below the canyon on lines 1 to 9 and 10 to 15. Bedrock outcroppings were not seen in this area. The anomaly on the far right limit is likely related to slide rock or sub-crop as the grid was extended upslope from the edge of the active creek. The anomaly on the mid to left limit may be related to the alluvial environment. Water slows in this area as the extents of the creek valley widen.

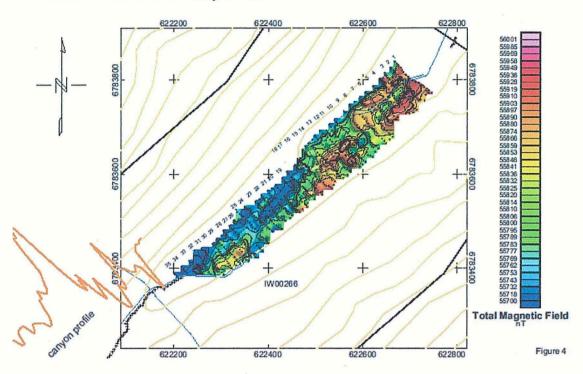


Fig. 4: Magnetic survey results below canyon on Nines Creek.

A small bench may be present on the right limit lines 1-2 and is coincident with the magnetic high anomaly.

**10.0 DRILLING** No drilling has been performed on the property.

11.0 CURRENT EXPLORATION

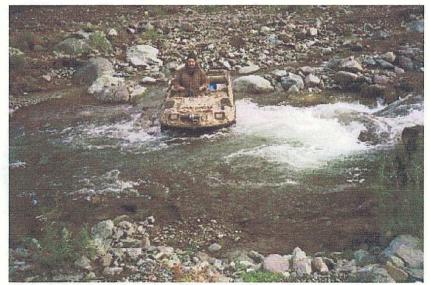


Plate 9: High water conditions on Nines Creek

## 11.1 Prospecting Program Method and Approach



In April, 2010, a visit was made to the property to evaluate the local conditions to determine if an early start to the season's exploration would be possible. This was not the case as much of the creek was covered in snow and ice from the preceding winter. Frozen around conditions were such that an

Plate 10: Caterpillar E120 used in the trenching program

early sampling program would not be possible. The inability to place geophysical probes into the frozen gravels also negated any early Resistivity surveys that were planned. Subsequent trips to the creek in June, July and August of 2010 discovered high water conditions that did not abate for the remainder of the

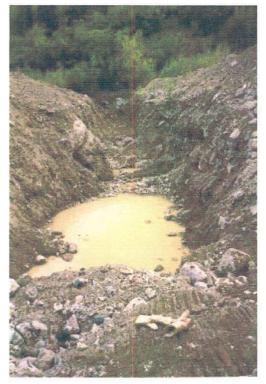
season. Traverses were made into upper Nines creek, above the canyon. to scout out and flag a possible access route for equipment and personnel into the "Anomaly A" area outlined above and to test the surface gravels present on the 2-Mile Prospecting Lease situated on the south fork of Nines Creek.



Plate 11: Kubota 121 used in the 2010 trenching program



Plate 12: Trenching on the right limit of Nines Creek



**11.2 Trenching Method and Approach** In late August and September, an extensive program of trenching was completed over magnetic anomalies outlined by geophysical surveys completed in 2009. Eleven trenches and pits for a total of 3746 cubic yards of gravel were dug and strategically placed to facilitate sampling of the deepest gravels collected. The onset of winter conditions terminated the trenching program and postponed the sampling of the gravels to determine possible placer gold grades until the 2011 season

Plate 13: Trenching between lines 11 and 12 Photo looking SW

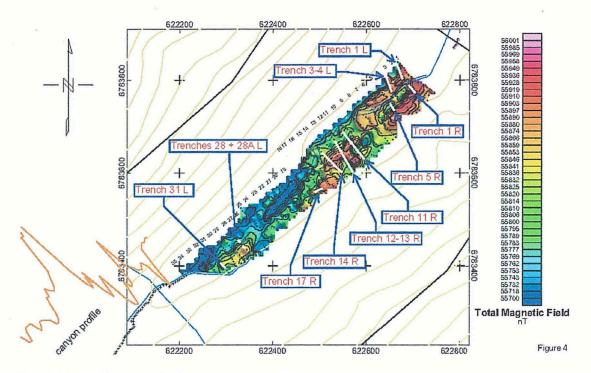


Fig. 5: Trenches dug below canyon on Nines Creek.

#### **12.0 DATA VERIFICATION**

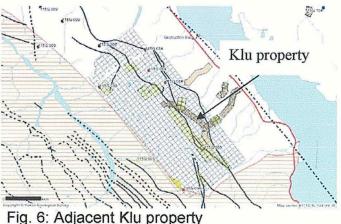
No data verification was completed during the program.

#### **13.0 ADJACENT PROPERTIES**

#### 13.1 Klu property

The property covers an area of complex geology and thrust faulting in which late Triassic peridotite and gabbro dykes intrude steeply dipping sedimentary rocks of the Permian Hasen Creek Formation. Ni-Cu-PGE mineralization in the region is associated with basal marginal gabbro phase of the Spy Sill.

Sulphide mineralization at the Congdon occurrence (Spy Showing) Minfile 115G 003 occurs in siltstone in the footwall of the sill, marginal gabbro and feldspathic peridotite. Chalcopyrite and nickeliferous pyrrhotite at the base of the main peridotite dike and galena and sphalerite in quartz-carbonate veins up to 30 cm wide cut the dike.



1/31/2011

One vein assayed 1.2% Zn and 0.25% Pb. Minor chalcopyrite and pyrrhotite are reported about 4.8 km to the southeast.

Silt samples from streams draining the Klu claims returned anomalous values (up to 673 ppm Ni and appear to outline peridotite intrusions. Soil sampling in 1988 outlined four gold and four platinum and palladium anomalies with values up to 920 ppb Au, 158 ppb Pt and 277 ppb Pd over an ultramafic sill. Inco found intermittent sulphide showings over a strike of 3.6 km along the base of the 6 km long Spy Sill. These sulphide showings have highly anomalous PGE grades along with significant Ni and Cu. The number and size of peridotite intrusions occurring on the claim block and in the belt suggest they are part of a very large magmatic system. No significant Ni-Cu-PGE showings have been found at intrusions other than the Spy Sill. Grab samples collected by Inco from the gabbro-siltstone contact assayed up to 3.1% Ni, 2.8% Cu, 0.2% Co, 3.1 gm/t Pt, 1.4 gm/t Pd and 1.0 gm/t Au.

A heavy mineral sample collected 400 m downstream from the intersection of the Spy Sill and the south branch of Nines Creek returned 700 ppm Pt and > 10 000 Au. The high Au value may not necessarily be related to sulphide mineralization and may indicate possible placer gold potential at that point.

#### 13-2 Fry Pan Creek (placer)

Fry Pan creek is located 31 km north-west of Nines Creek and exists as a small tributary to the Duke River. Little mining has occurred on the creek and only a few bulk sampling operations have tested the creek gravels. A small test mining of the creek existed in 1989. A second mining operation in 1993 is reported to have sluiced 2500 bcy of material and recovered 256 ounces of placer gold. Test pitting programs attempted to determine the gold content of the creek



Fig. 7: Adjacent placer properties

gravels in both 1993 and 1995. The evaluation program completed by the author in 1995 found gold distributed in creek gravels and in the glacial till that covered most of the property. The average grade of the samples collected during the program was 0.33148 oz/lcy. Many of the samples contained a high clay content which proved problematic in the processing (sluicing) and would undoubtedly be an issue in any mining operation on the creek.

## 13-3 Burwash Creek (placer)

Burwash Creek lies a distance of 37 km north-west of Nines Creek and 6km north-west of Fry Pan Creek. Historical records of gold production are spotty at best with government royalty figures totaling 27,782 crude ounces. This is considered a minimum value as most coarse jewelry gold was and is still sold privately.

Placer gold in Burwash Creek has been found in several types of unconsolidated sediments, including 1) Modern river gravel, 2) at least 2 levels of alluvial bench gravel, 3) Interglacial river gravel, which is in places reworked and buried by modern gravel and glacial material, 4) glaciofluvial gravel, 5) glacial till, 6) colluvium derived from types 2 to 5; 7) tailings from previous mining activity and 8) mine tailings subsequently reworked by flood events in the modern stream. The fineness of gold on Burwash Creek is unusually consistent throughout its length, varying only from 850 to 860 and showing no distinctive change in distance downstream. The gold is coarse and nuggets are common, with the largest found weighing 16 ounces. Generally the gold is smooth, flat and well traveled, and quartz attachments are rare. In the main valley, the grain size is evenly distributed between plus 8 mesh and minus 8 mesh, while on the benches coarser gold occurs with the ratio of 90% plus 8 mesh and 10% minus 8 mesh. (Lebarge, 2008)

## 14.0 MINERAL PROCESSING AND METALLURGICAL TESTING

There was no mineral processing or metallurgical testing completed during the present program.

## **15.0 MINERAL RESOURCE AND MINERAL RESERVE ESTIMATES**

There was no mineral resource or mineral reserve estimates completed during the present program.

## 16.0 OTHER RELEVANT DATA AND INFORMATION

There is no other relevant data or information included in this report.

## **17.0 INTERPRETATION AND CONCLUSIONS**

Potentially significant deposits of placer gold may be present on the Nines creek property. Sampling of the Nines Creek gravels in 2008 resulted in visible gold being present in 5 of the 6 samples collected. The weight of the largest flakes recovered from the claims to date was 2.6mg from sample N32.1. The largest concentration of gold collected on the creek weighed 16.6mg and was collected by the author from a one bucket sample of mixed gravels located on bedrock approximately 500m below Nines 31. The results of historic programs demonstrate that the claims comprising the Nines Creek property contain placer gold in the surface environment over a wide area of the creek channel below the lower canyon present on the property. The termination of sampling program at Nines Creek in 2010 due to the onset of winter conditions has not downgraded the potential of the gravels on the creek. Freezing temperatures have only

delayed the process of determining potential grades present until the upcoming 2011 season.

## **18.0 RECOMMENDATIONS AND BUDGET**

A systematic program of geophysical surveys (resistivity) to determine depth to bedrock should follow or be conducted concurrent to the sampling of the trenched gravels depending on water conditions on the creek. Such surveys should be conducted on the property to determine both the depth of potentially gold bearing gravels and to allow calculations of the volume of gravels present on Nines Creek. Sampling of the existing gravels trenched in 2010 should be completed at appropriate intervals along the trench to determine any pay streaks on the creek and vertically through the gravel piles in an effort to determine an accurate depth of any gold bearing beds. From this sampling program an initial estimate of the extent and grade of mineralization within the gravels can be calculated.

Geophysical survey	\$10,000
Excavator (100hr) for testing program	\$20,000
Test plant (10 days)	\$3000
Reclamation	\$5000
Equipment rental (Argo, Trucks, etc.)	\$5000
Mob/Demob	\$4,000
Sampler (10 days @ \$200/day)	\$2,000
Forman (10 days @ \$400/day)	\$4,000
Accommodation and meals	\$4,000
Reporting	\$3,000
Contingency (15%)	<u>\$7,500</u>
	\$67,500

Respectfully submitted,

Ken Galambos P.Eng. (APEY Reg. No. 0916, APEGBC license 35364) KDG Exploration Services

Victoria, BC. January 31, 2011

#### **19.0 REFERENCES**

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#### 20.0 CERTIFICATION, DATE AND SIGNATURE

1) I, Kenneth Daryl Galambos of 1535 Westall Avenue, Victoria, British Columbia am self-employed as a consultant geological engineer, authored and am responsible for this report entitled "Evaluation Report on the Nines Creek Project", dated January 31, 2010.

2) I am a graduate of the University of Saskatchewan in Saskatoon, Saskatchewan with a Bachelors Degree in Geological Engineering (1982). I began working in the mining field in 1974 and have more than 26 years mineral exploration and production experience, primarily in the North American Cordillera. Highlights of this experience include the discovery and delineation of the Brewery Creek gold deposit, near Dawson City, Yukon for Noranda Exploration Ltd.

3) I am a registered member of the Association of Professional Engineers of Yukon, registration number 0916 and have been a member in good standing since 1988.

4) I have visited the subject mining property of this report and am a "Qualified Person" in the context of and have read and understand National Instrument 43-101 and the Companion Policy to NI 43-101. This report was prepared in compliance with NI 43-101.

5) This report is based upon a site visit to the property from September 25-27, 2008, the author's personal knowledge of the region and a review of additional pertinent data.

6) As stated in this report, in my professional opinion the property is of potential merit and further exploration work is justified.

7) To the best of my knowledge this report contains all scientific and technical information required to be disclosed so as not to be misleading.

8) I am partners with Ralph Keefe on Nines Creek and on a number of properties in the Babine/Takla Lakes and other areas of British Columbia. My professional relationship is as a non-arm's length consultant, and I have no expectation that this relationship will change.

9) I consent to the use of this report by Ralph Keefe for such assessment and/or regulatory and financing purposes deemed necessary, but if any part shall be taken as an excerpt, it shall be done only with my approval.

Dated at Victoria, British Columbia this 31st day of January, 2011. "Signed and Sealed" હ૧.૯

Ken Galambos, P.Eng. (APEY Reg. No. 0916, APEGBC license 35364) KDG Exploration Services 1535 Westall Ave. Victoria, British Columbia V8T 2G6

Nines Creek 43-101 Report

# 20.0 Statement of Expenditures

Personnel Ralph Keefe 16 days @ \$350/day Brad Schmidt 3 days @ \$200/day Bruce McMillan 73.5 hrs @ \$40/hr		5600.00 600.00 8380.00
Room and board		5800.00
Equipment Kubota 121 Excavator 84 hrs @ \$95/hr Caterpillar E120 42.5 hrs @ \$140/hr Argo 15 days @ \$70/day Misc. equipment (pumps/generator/trailers) Truck		7980.00 6811.87 1050.00 1106.00 1500.00
Fuel Misc. staking supplies		1566.00 324.00
Kluane Helicopters		4294.00
Report		3360.00
	Total	\$48,371.87

Appendix A

Weight of Recovered Gold

# Appendix A

Abbreviations for visual estimate of gold in concentrate: vs-very small, s-small, m-medium, ml-medium large, l-large

Sample #	Gold in fines	Weight of gold
	#	mg
N31-1	0	
N32-1	1 fl, 1 ml	2.6
N33-1	1 s	0.1
N34-1	1 m	0.1
LC-Bank	2 s	0.1
LC-HG	numerous s	2

Appendix B

Assay Results of Sample Concentrates

	Method Analyte Unit MDL	G6 Au GM/T 0.01
Sample	Туре	
N31-1	Concentrate	0.4
N32-1	Concentrate	1.18
N33-1	Concentrate	0.81
N34-1	Concentrate	0.4
LC-BANK	Concentrate	1.76
LC-HG	Concentrate	4.02
Reference		
Materials		
STD OXH55	STD	1.35
STD OXK69	STD	3.69
STD OXH55	STD	1.3
STD OXK69	STD	3.72
STD OXH55	STD	1.29
STD OXK69	STD	3.59
STD OXH55	STD	1.31
STD OXK69	STD	
STD OXH55	STD	1.31
STD OXH55	STD	1.33
STD OXH55	STD	1.38
STD OXH55	STD	1.34
STD OXH55	STD	1.38

Appendix C

# Total Magnetic Field Survey on Placer Prospecting Lease IW00266 Nines Creek, Yukon

Registered Owner: Ralph Keefe

## **Total Magnetic Field Survey**

on

# Placer Prospecting Lease IW00266 Nines Creek, Yukon Registered Owner: Ralph Keefe

Whitehorse Mining District, NTS: 115 G/02 Latitude: 61° 06' 50", Longitude: 138° 44' 00" Dates Worked: August 22 – 28, 2009

By:

Robert Stirling 12 Mossberry Lane Whitehorse, Yukon Y1A 5W4 Tel: 867-633-3829

Dated: September 09, 2009

## TABLE OF CONTENTS

1.0 Summary and Introduction	3
2.0 Property Description and Location	3
3.0 Accessibility and Infrastructure	4
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5.0 Physiography and Vegetation	4
6.0 Geological Setting	4
7.0 Geophysical Survey	6
7.1 Layout of Survey Grid	6
7.2 Survey Methods and Equipment	6
8.0 Interpretation and Conclusions	7
9.0 Recommendations	7

## <u>FIGURES</u> (following page 3)

Location Map – Yukon
Location Map – Prospecting Lease
Total Magnetic Field Survey – Above Canyon
Total Magnetic Field Survey – Below Canyon
Total Magnetic Field Survey - Profile of Lower Canyon

## **APPENDICES**

Appendix 1: Statement of Costs Appendix 2: Log of Work Appendix 3: Statement of Qualifications Appendix 4: Raw and Corrected Survey Data

## 1.0 Summary and Introduction

A 5 mile placer prospecting lease was staked on Nines Creek in September 2008 by Ralph Keefe, P.O. Box 201, Francois Lake, BC V0J 1R0. In 2008 Ralph Keefe and Ken Galambos spent 3 weeks evaluating the placer potential of Nines Creek.

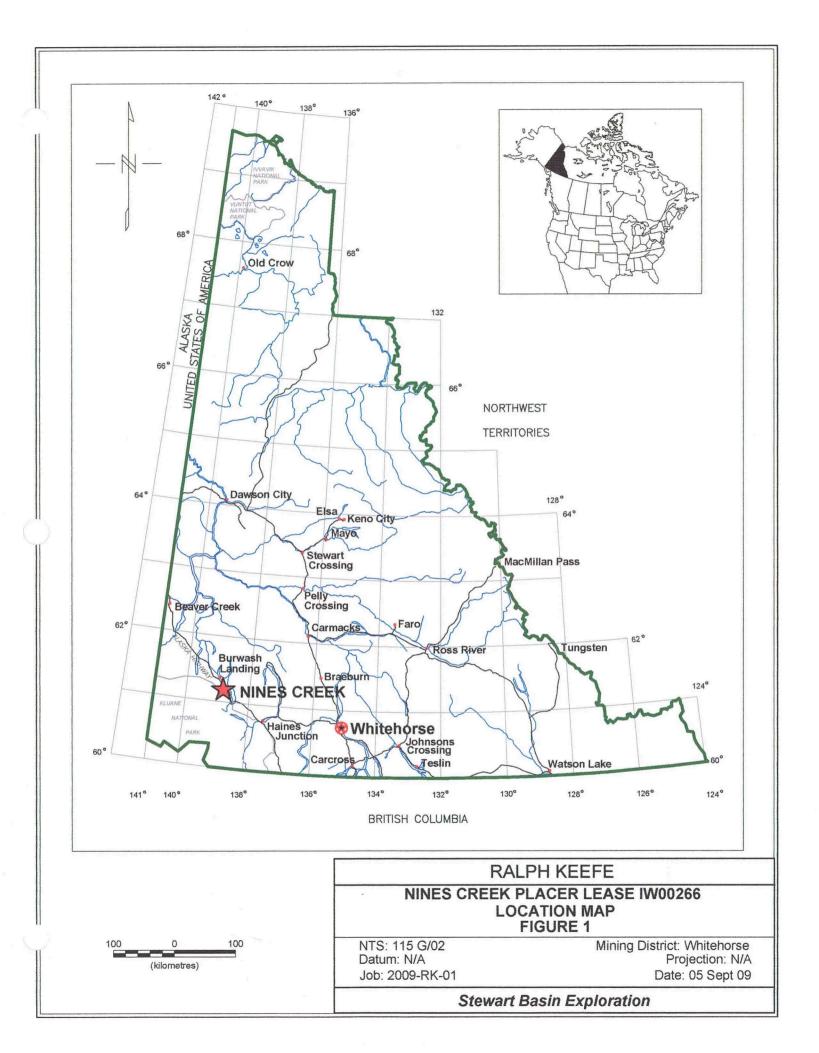
The purpose of the total field magnetic survey was to locate areas of magnetite concentration. Gold and heavy minerals are often associated with magnetite deposition.

## 2.0 Property Description and Location

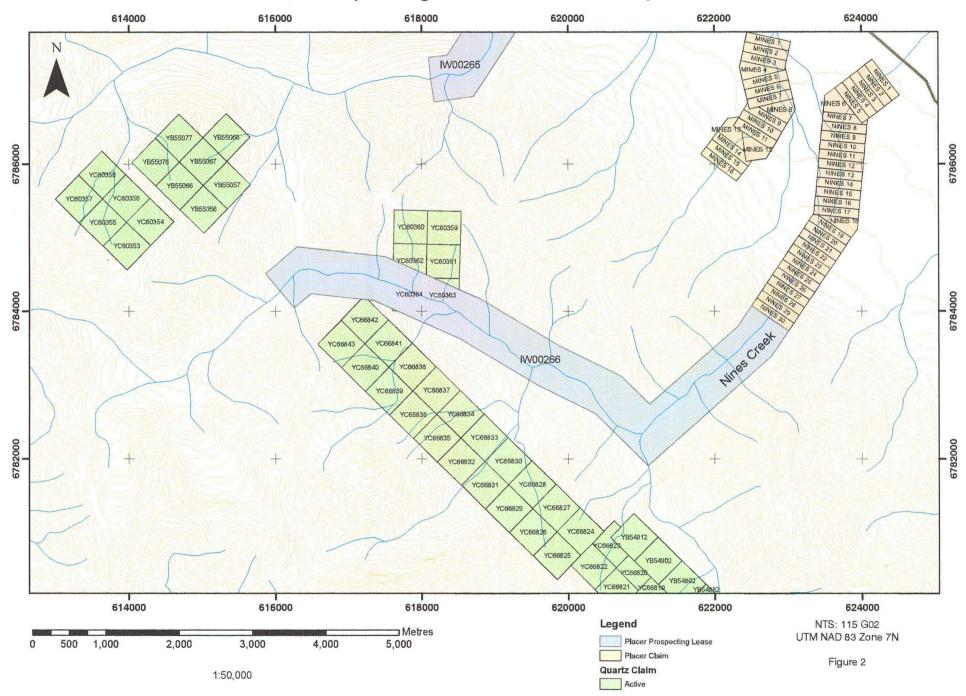
The 5 mile prospecting lease is located in the Whitehorse Mining District, N.T.S. 115 G/02. The center of the area surveyed is located at latitude:  $61^{\circ} 06' 50''$ , longitude:  $138^{\circ} 44' 00''$ .

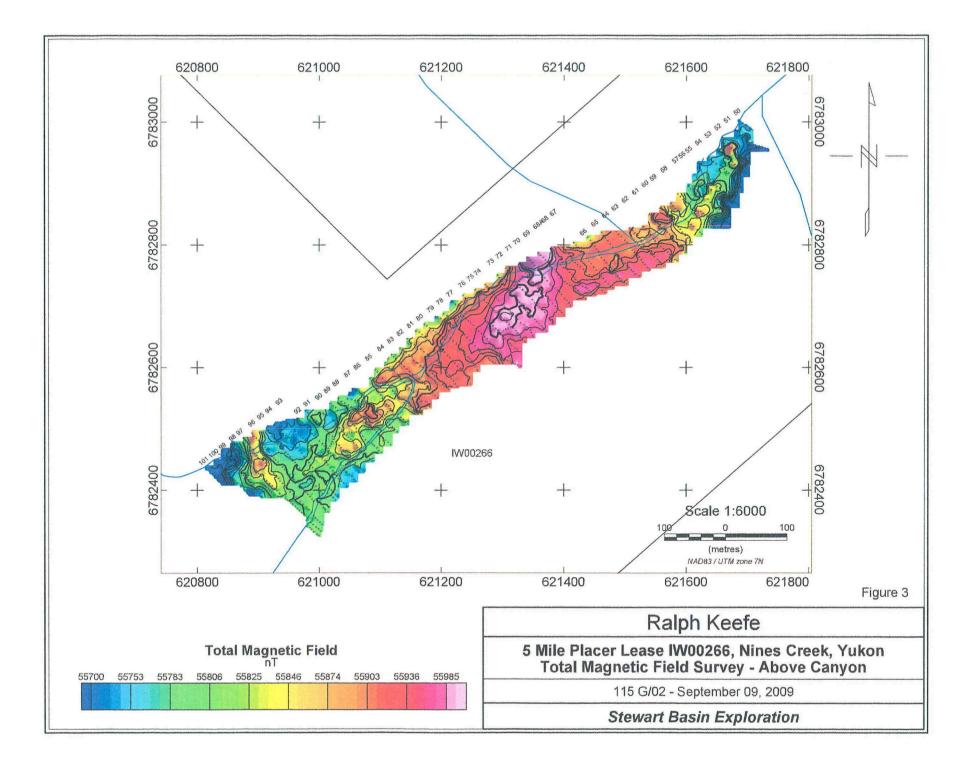
The lease is in good standing and ownership is as follows.

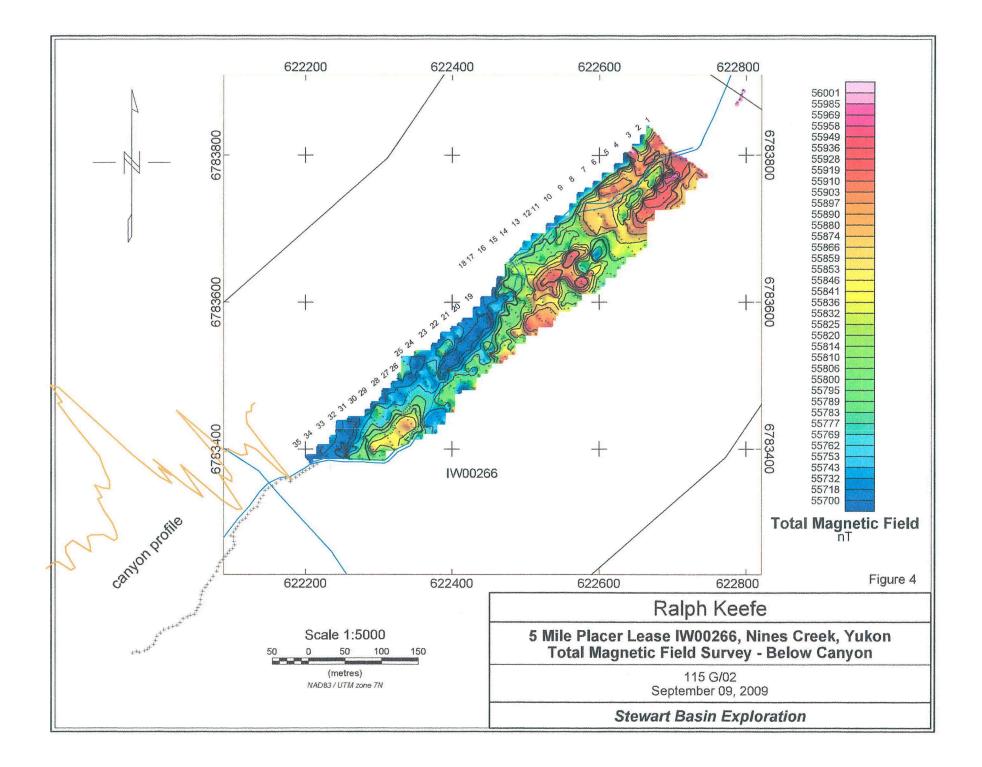
Grant No.	Туре	Owner	<b>Recording Date</b>	<b>Expiry Date</b>	NTS
IW00266	Prospecting Lease	Ralph Keefe - 100%.	2008-09-30	2009-09-30	115G02

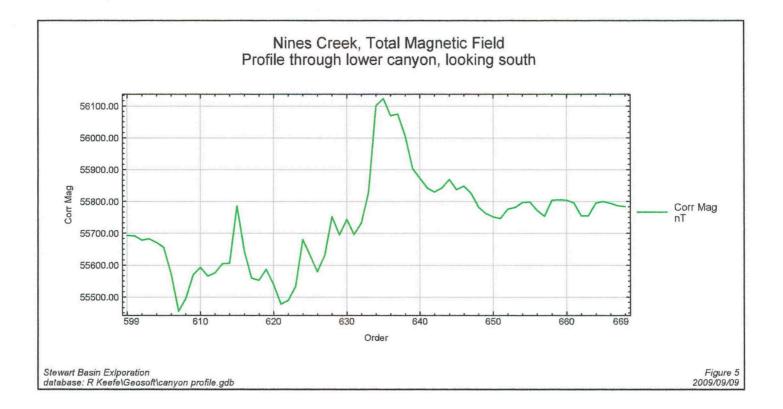


**Prospecting Lease Location Map** 









### 3.0 Accessibility and Infrastructure

The lease is located on Nines Creek approximately 270 km northwest of Whitehorse and 8 km southeast of Destruction Bay, Yukon. Nines Creek flows to the northeast into Kluane Lake.

Access is via the Alaska Highway and a 2 wheel drive gravel road for a distance of 3.5 km where it is washed out. Beyond this access is by quad to the base of the canyon, with creek crossings. Access is by foot or helicopter beyond this point.

## 4.0 History

The history of the area is unknown. There was no evidence of placer mining in the area of the survey. Several older quartz claim posts and one placer post was found.

## 5.0 Physiography and Vegetation

The area of the survey is located in the St. Elias Mountains to the south of Kluane Lake in the Kluane Game Sanctuary at an elevation of 1,100 metres. Bedrock outcrop was noted in the survey area and in the canyons. Spruce and willow are moderately dense on both limits of the creek. The active creek area is open and rocky with vegetation of thinly scattered willow.

The width of active creek area above the canyon is from 80 to 210 metres. The width of active creek area below the canyon is from 50 to 85 metres.

The gravels in the survey area appear to be thawed.

Evidence of grizzly bear and sheep was noted.

### 6.0 Geological Setting

The geology in the area is as follows.

### **NW1: WRANGELL LAVAS**

rusty red-brown, phyric and non-phyric basaltic andesite flows (minor pillow lava), interbedded with felsic tuff, volcanic sandstone and conglomerate; acid pyroclastics related to intra-Wrangell intrusions; thin basaltic andesite and andesite flows (Wrangell Lavas)

### **MW: WRANGELL SUITE**

fine to medium grained, hornblende +/- biotite granodiorite and porphyritic (K-feldspar) hornblende granodiorite; medium grained, uniform biotite diorite and pyroxene gabbro; subvolcanic homblende +/- biotite rhyolite, rhyodacite, dacite, and trachyte (Wrangell Suite)

#### **CPS1: SKOLAI**

volcanics succeeded upward by clastic strata, tuff, breccia, argillite, agglomerate, augite-phyric basaltic to andesitic flows (Station Cr. Fm); succeeded by thinbedded argillite, siltstone, minor greywacke and conglomerate and local thin basaltic flows, breccia and tuff (Hasen Cr. Fm) (Skolai Gp., Station Creek and Hasen Creek)

#### JKD1: DEZADEASH

interbedded light to dark buff-grey lithic greywacke, sandstone, siltstone, thin dark grey shale, argillite, phyllite and conglomerate; rare tuff (**Dezadeash**)

#### **uTrC: CHITISTONE**

thin interbedded light to dark grey argillaceous limestone and dark grey argillite; massive light grey limestone, limestone breccia and darker grey, well-bedded limestone; white to creamy-white gypsum and anhydrite (McCarthy, Chitistone and Nizina limestones)

#### uTrN: NICOLAI

amygdaloidal basaltic and andesitic flows, with local tuff, breccia, shale and thinbedded bioclastic limestone; volcanic breccia, pillow lava and conglomerate at base; locally includes dark grey phyllite and minor thin grey limestone oof Middlee Triassic (Nicolai Greenstone)

#### PTrK1: KLUANE ULTRAMAFIC SUITE

medium grey-green, massive, medium grained, pyroxene gabbro and greenstone sills; sheeny black peridotite, rare dunite (Kluane-type Mafic-Ultramafics; Squaw Datlasaka Ranges Gabbro-Diabase Sills)

# 7.0 Geophysical Survey

A closely spaced total magnetic field survey was performed for the purpose of locating areas of magnetite concentration. Magnetite and heavy mineral concentration is often accompanied by gold. The survey was located in two areas, above and below a section of the creek that passes through a canyon. The canyon exposes bedrock at various locations.

# 7.1 Layout of Survey Grid

A grid was located using an azimuth of 142 degrees for the grid lines. The compass declination was 23.5 degrees east. The base line was marked with pickets and end of lines with pickets and/or flagging. Line was cut with hand tools and flagged to the extent that one could see from point to point or be able to walk through the bush without too many problems. In open areas line was followed by sighting on the baseline picket or person standing at the picket.

The station spacing was 5 metres and the line spacing 20 metres.

The upper and lower canyons were not accessible to survey with the grid layout so a profile line was run for the length of the lower canyon. The station spacing was 5 metres.

## 7.2 Survey Methods and Equipment

A GEM Systems GSM 19T proton magnetometer was used for the base station. Base station readings were taken every 3 seconds. A GEM Systems GSM 19 TW proton magnetometer was used for the mobile unit. Mobile stations were read in immediate mode with interpolation.

The mobile unit was equipped with differential GPS. Real time corrections were made when sufficient data was available. Post processing was disabled. GPS positions were recorded in NAD83 UTM Zone 7N. The magnetometer survey was run by Bob Stirling of Whitehorse, Yukon. Ralph Keefe established the survey grid and reference points and assisted with logistics.

Survey data was downloaded each day to a field computer and corrected for diurnal drift. A datum of 56,000 nT was used. Four stations on the grid were read each day in order to level the data. Based on the readings it was not necessary to level data from day to day. Survey data was corrected with GEMLinkW 4.

Number of stations established: 1,700

Line kilometres surveyed: 8.5 km

The survey data was compiled, checked and edited. Approximately 35 southerly GPS locations were edited due to poor satellite reception. The poor reception was related to multipath errors and higher elevation directly to the south of the grid.

Colour contour maps were produced using a minimum curvature gridding method and a grid cell size of 1.25m (25% of the sample spacing). Geosoft Target was used for gridding and geophysical map production.

## 8.0 Interpretation and Conclusions

The survey was completed successfully and areas of interest were found.

### Anomaly A

A magnetic high anomaly was found above the canyon on lines 61 to 85. Bedrock outcrop was not observed in this area. The left and right limit valley slopes consist of alluvial till and/or glacial outwash and slide rock. Anomaly A may be related to the alluvial environment as the water velocity slows here before entering the canyon. The width of the active channel decreases considerably.

### Anomaly **B**

A moderate to high magnetic anomaly was found below the canyon on lines 1 to 9 and 10 to 15. Bedrock outcrop was not seen in this area. The anomaly on the far right limit is likely related to slide rock or sub-crop as the grid was extended upslope from the edge of the active creek. The anomaly on the mid to left limit may be related to the alluvial environment. Water slows in this area as the extents of the creek valley widen.

A small bench may be present on the right limit lines 1-2 and is coincident with the magnetic high anomaly.

### 9.0 Recommendations

The depth to bedrock should be determined. Excavator test pits were dug on the claims below the lease in 2008 by the respective claim holders. The size of the excavator is unknown. Bedrock was not reached in any of the test pits. (Pers. communication R. Keefe)

A seismic survey may be suitable for determining the depth to bedrock.

The areas of Anomaly A & B should be followed up with excavator test pits and/or drilling to determine if the anomalies are related to the alluvial environment.

# Statement of Costs

Prospecting Lease IW00266 Dates worked: August 22 – 28, 2009 Costs are for R. Stirling unless noted.

Item	Details	Amount and Unit Cost	<u>Total Cost</u>
Geophysical survey	R. Stirling	5 days @ \$400/day	\$2,000.00
Gridding for survey	R. Keefe	5 days @ \$400/day	\$2,000.00
Mob-demob	R. Stirling	1 days @ \$300/day	\$300.00
Transportation	Vehicle	2 days @ \$150/day	\$300.00
Transportation	Trailer	2 days @ \$50/day	\$100.00
Transportation	Quad	5 days @ \$75/day	\$375.00
Transportation	Fuel gas	17.41@1.069/1	\$18.60
Transportation	Fuel diesel	87.24 1 @ 1.029/1	\$89.77
Survey equipment	Proton Magnetometers	4 days @ \$175/day	\$700.00
Report	Process data, maps and report writing	2.0 days @ \$400/day	\$800.00
		TOTAL COST	\$6,683.37

Log of Work: Robert Stirling (RS), 12 Mossberry Lane, Whitehorse, Yukon Y1A 5W4 Ralph Keefe (RK), P.O. Box 201, Francois Lake, BC V0J 1R0		
Date	Description	
Aug. 22 <sup>nd</sup>	Mobilize gear with truck and trailer from Whitehorse to Nines Creek. RS	
Aug. 23 <sup>rd</sup>	Locate grid lines on right limit below canyon. RS/RK	
Aug. 24 <sup>th</sup>	Magnetometer survey on right and left limit below lower canyon. Download data. Base station was not started correctly so will have to be redone. RS	
	Locate grid lines for survey. RK	
Aug. 25 <sup>th</sup>	Redo mag on right and left limit grid below lower canyon. Download, level and plot data. RS	
	Locate grid lines for survey. RK	
Aug. 26 <sup>th</sup>	Locate baseline above canyon to fork of creek. RS/RK	
	Magnetometer survey on left limit from the forks to start of the upper canyon. Download and level data. RS	
	Locate grid lines for survey. RK	
Aug. 27 <sup>th</sup>	Magnetometer survey on left and right limits of both forks from line 103 towards upper canyon. RS	
	Locate grid lines for survey. RK	
Aug. 28 <sup>th</sup>	Magnetometer survey on right limit ending at the upper canyon. Demob from Nines Creek to Whitehorse. RS	
	Locate grid lines for survey. RK	
Aug. 30 <sup>th</sup> to Sept. 6 <sup>th</sup>	Process data, produce maps and write report. RS	

### Statement of Qualifications

I, Robert Stirling, with business address of 12 Mossberry Lane, Whitehorse, Yukon Y1A 5W4, do hereby certify that:

- 1. I have been involved in mining and exploration in the Yukon and Northwest Territories since 1977.
- 2. I am experienced in performing total magnetic field surveys, processing data and producing contour maps.
- 3. I have been involved in placer prospecting in the Yukon since 1990.
- 4. I have produced maps and compiled data for geological reports since 1991.
- 5. I, Robert Stirling collected the data for this report.
- 6. I, Robert Stirling have no (0%) interest in the prospecting lease described in this report.

**Robert Stirling** 

Raw and Corrected Survey Data

Survey data is included in text and spreadsheet format in the digital file.

TECHNICAL ON REPORT ON NINES CREEK CD does not match report YIN 18 ... 066