



BC Geological Survey
Assessment Report
37834



Ministry of Energy, Mines & Petroleum Resources
Mining & Minerals Division
BC Geological Survey

Assessment Report
Title Page and Summary

TYPE OF REPORT [type of survey(s)]: Event 5711793

TOTAL COST: \$6,030.00

AUTHOR(S): NICHOLAS CLIVE ASPINALL

SIGNATURE(S):

Handwritten signature of Nicholas Clive Aspinall

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S):

YEAR OF WORK: 2018

STATEMENT OF WORK - CASH PAYMENTS EVENT NUMBER(S)/DATE(S):

PROPERTY NAME: BURDETTE CREEK

CLAIM NAME(S) (on which the work was done): Placer Claim Tenures 1041164 and 1055624,

COMMODITIES SOUGHT: GOLD

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN: NOT KNOWN

MINING DIVISION: ATLIN

NTS/BCGS: NTS 104N

LATITUDE: 59 19 48 LONGITUDE: 133 28 45 (at centre of work)

OWNER(S):

1) NICHOLAS CLIVE ASPINALL 2)

MAILING ADDRESS:

PO. BOX 22, ATLIN, BC, V0W 1A0

OPERATOR(S) [who paid for the work]:

1) AS ABOVE 2)

MAILING ADDRESS:

AS ABOVE

PROPERTY GEOLOGY KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude):

CACHE CREEK GROUP ROCKS, UPPER PALEOZOIC, ATLIN ACCRETIONARY COMPLEX, ATLIN OPHIOLITIC ASSEMBLAGE, LIMESTONE, ULTRABASICS, SERPENTINES, LISTWANITE

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS: ASPINALL 2016, 2017

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
<b>GEOLOGICAL (scale, area)</b>			
Ground, mapping _____			
Photo interpretation _____			
<b>GEOPHYSICAL (line-kilometres)</b>			
Ground			
Magnetic _____			
Electromagnetic _____			
Induced Polarization _____			
Radiometric _____			
Seismic _____			
Other _____			
Airborne _____			
<b>GEOCHEMICAL (number of samples analysed for...)</b>			
Soil _____			
Silt _____			
Rock _____			
Other _____			
<b>DRILLING (total metres; number of holes, size)</b>			
Core _____			
Non-core _____			
<b>RELATED TECHNICAL</b>			
Sampling/assaying _____			
Petrographic _____			
Mineralographic _____			
Metallurgic _____			
<b>PROSPECTING (scale, area) SLUICING, PANNING</b>		1041164 and 1055624	\$4,430
<b>PREPARATORY / PHYSICAL</b>			
Line/grid (kilometres) _____			
Topographic/Photogrammetric (scale, area) _____			
Legal surveys (scale, area) _____			
Road, local access (kilometres)/trail _____			
Trench (metres) _____			
Underground dev. (metres) _____			
Other _____			1600
		<b>TOTAL COST:</b>	<b>\$6,030</b>

**Event 5711793**  
**2018 Manually Testing and Estimates of Gold in Gravels on Placer**  
**Claim Tenures 1041164 and 1055624, Burdette Creek, Atlin MD,**  
**Centered at**  
**59 deg 19.796' N and 133 deg 28.753' W, NTS 104 N.**



Robert Vallee from Carcross, Yukon, Hand sluicing gravels on Burdette Creek, 2018 Atlin MD.

By  
Nicholas Clive Aspinall, P.Eng  
Aspinall Geological Consultants  
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Tel: 250-651-0001  
E-mail: [ncaspinall@gmail.com](mailto:ncaspinall@gmail.com)

Work Period: Irregular days, 28<sup>th</sup> May to 6<sup>th</sup> September 2018  
Report: 12<sup>th</sup> October 2018

### Summary

Placer miner Robert Vallee of Carcross spent a total of 60 man-hours, over a 15-day period testing placer tenures 1041164 & 1055624. Mr. Vallee was assisted by Kenny Atlin of Carcross and occasionally by family members.

An additional 6 hours man were spent by claim owner Clive Aspinall and three visitors to Atlin BC in sluicing and panning on claim 1055624 to test their reaction should selected placer claims on Burdette Creek be interesting enough as future venture tourist destination.

During the 60 manual work hours accumulated by Mr. Vallee, it is estimated 3.125 cubic yard of placer gravels as were hand dug and sieved through a ½ inch grizzly before being washed through a sluicing system using a light pump.

It is also estimated one additional yard was removed as waste.

The concentrate was then panned, giving a total 12 grams of placer gold.

Accepting an 80% confidence limit, it is concluded in 2018 selected channel banks on lower Burdette Creek, placer gold grades could be as high as 3.072 grams per cubic yard.

This compares favorably with 2017 estimates, using the same confidence limits then concluded selected Burdette Creek gravels could be as high 4.8 grams per cubic yard.

The average for both years therefore is 3.936 grams/yard at 80% confidence limits.

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### **Introduction and Terms of Reference**

This report summarizes a third season testing Burdette Creek placer gravels. Tests were made on placer claims 1041164 and 1055624 during 16 days, between 28<sup>th</sup> May to 6<sup>th</sup> September 2018.

The purpose of these activities was to test the lower end of Burdette Creek for placer gold, with the intention of making the above claims a focus of a future venture tourism business.

During 2015 the author incorporated a British Columbia venture tourism company, *Atlin Gold Fields Geotours Inc.* The author's Burdette Creek placer claims will hopefully become the core of that venture tourism business.



Photo #1. Visitor from Yangzhou China, panning gold, Burdette Creek under the guidance of *Atlin Gold Fields Geotours Inc.*

**Reliance on other Experts, and Assessment Work Applied.**

Robert Vallee manual placer gold miner, and Kenny Atlin, both of Carcross, Yukon carried out the testing work over 15 days between 28<sup>th</sup> May to 6<sup>th</sup> September 2018. Family and relatives also occasionally helped Mr. Robert Vallee.

Clive Aspinall of Atlin, the author, spent 2<sup>nd</sup> September 2018 taking Atlin visitors to Burdette Creek to test their reactions in discovering gold in stream gravels on Burdette Creek, and the feasibility of operating a future venture tourism business.

Therefore a total of 16 days were spent working the claims. Only work hours by Mr. Robert Vallee and author are applied to 2018 assessment work.

### Work Area Description and Location

The Atlin area is traditionally territory of the Taku River Tlingit First Nations, Figure 1. The test area is centered at 59 deg 19.796' N and 133 deg 28.753' W, in Northwest British Columbia, Atlin Mining Division.

Between 14<sup>th</sup> October 2015 to 2<sup>nd</sup> January 2018, the author accumulated title to 214.3371 hectares of placer claims on Burdette Creek, Table 1, and Figures 1 & 2.

TABLE 1

Burdette Creek Placer Claim Status 12 October 2018						
Title Number	Claim Name	Owner	Good To Date	Status	Area (ha)	Area ha
1041164	BURDETTE #1	101024 (100%)	2028/JAN/10	GOOD	32.9916	32.9916
1047237	BURDETTE #2	101024 (100%)	2023/JAN/10	GOOD	32.9817	32.9817
1047239	BURDETTE#3	101024 (100%)	2023/JAN/10	GOOD	49.4573	49.4573
1047273	BURDETTE CREEK#4	101024 (100%)	2023/JAN/10	GOOD	16.4938	16.4938
1055624	BURDETTE CREEK #5	101024 (100%)	2023/OCT/18	GOOD	16.4918	16.4918
1057410	BURDETTE CREEK #5	101024 (100%)	2023/JAN/02	GOOD	65.9209	65.9209
Total Area						214.3371

"Good to Dates" subject to MTO approvals

During 2018, assessment work recording 60 hours plus an additional hours by the author of gravel testing were completed on tenures 1041164 and 1055624 Figures 2&3.

### Accessibility to Atlin, Climate, Local Resources, Infrastructure, Physiography Wildlife.

Atlin is the most northerly community in British Columbia. This community is accessible from Whitehorse, via the Alaska Highway and the newly completed chip seal road Atlin road. Total road distance from Whitehorse to Atlin is 180 km, a two-

hour journey during summer months. Atlin also lies east of the Coast Range Mountains and 140 air kilometers east of Juneau, Alaska.

Access from Atlin to Burdette Creek is by way of the Warm Bay road approximately 30 km south along the east shore of Atlin Lake. This road journey takes between 40 to 60 minutes.

Whitehorse is modern Canadian northern city with daily jet flights to Vancouver and other Canadian cities, and has a wide range of modern hotels, supermarkets and shopping malls, mineral exploration expediting services, fixed wing and helicopter charters.

Atlin has a fixed wing base; two helicopter bases, two hotels, RV parks, several campgrounds, stores, several bed and breakfast facilities, as well as an exploration and a placer mining workforce.

The region's climate is typical of northern British Columbia with winters averaging  $-23^{\circ}\text{C}$  in January with moderate snowfall. Winter conditions arrive with a vengeance around the 15<sup>th</sup> October and last until the middle of April, when longer spring days and spring thaw occur just as suddenly. Summers are pleasant with average temperatures up to  $17^{\circ}\text{C}$  with variable precipitation. Total annual precipitation averages 279.4 millimeters of moisture.

Relief of the area ranges from 600 meters ASL at Atlin Lake to mountainous areas peaking at 2000 meters ASL, at the headwaters of Burdette Creek.

Moose, caribou, black bear, grizzly, beaver, marten, otter, foxes and wolves are indigenous to the region.

### **History**

Atlin became known as a productive Canadian placer gold camp in 1898, after the "discovery" by two prospectors, Miller and McLaren, (who were probably informed where to find placer gold in Atlin by an unknown source when the two men were in Juneau, Alaska). They did indeed confirm paying gold on an Atlin creek<sup>1</sup> in January 1898.

As news spread, other gold seekers found impressive amounts of gold on Spruce, McKee, Otter, Ruby, and Boulder and Birch creeks.

Atlin Creek placer gold production, as determined by Holland (1950) from 1898 to

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<sup>1</sup> Pine Creek



1946 was 634,147 ounces. At today's price would be range about \$773 million in new wealth.

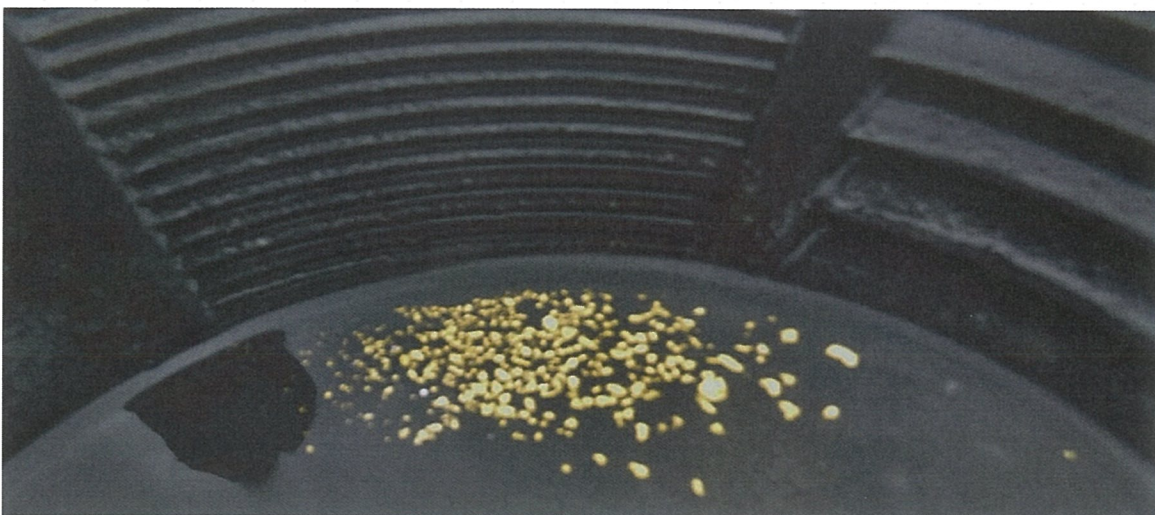
Up to about mid-1960s, placer mining in the Atlin Camp was mainly carried out using high-pressure monitors. Some operators used bulldozers, excavators, draglines, and more rarely by dredging. Small-scale placer mining was also active, using sluice boxes, rocker boxes, and even wheelbarrows to haul gravels. By the mid 1980s heavier mechanized placer mining became the fore on selected creeks.

The author anticipates the Atlin Camp has been producing several thousand ounces gold annually from 1980 to 2017 from approximately 50 lineal kilometers of creeks in the Atlin Camp. In 2007, just as many thought Atlin gold had been exhausted, Otter Creek, Boulder Creek, and Ruby Creek found new life as placer operations.

For instance in 2014 Otter Creek 19 kilometers East of Atlin has been developing four placer operations, with pits as much as 33 metres deep, 200 metres long and 60 metres wide. An experienced placer miner informed the author estimates seasonal production, (March-October) of all four operations has proved variable, but recovering between 25, 000 oz to 30, 000 oz total. In Canadian dollars that would amount to around \$CAN 51 million.

However cost production and reclamation of these four operations is estimated by the same experienced Atlin placer miner to be as high as 66% of total seasonal production; that could amount to \$CAN 33.6 million.

Total seasonal take home profits from the four operations on Otter Creek, since 2014, could therefore to be around \$CAN (51-33.6)=\$CAN19.4 million.



Photo#2. A partial cleanup of rice size and smaller gold, Burdette Creek, 2018

Hand mining on Burdette Creek since 2016 has proved minuscule in comparison.

Unlike many other placer creeks in the Atlin camp, Burdette Creek has historically been neglected from continuous heavy mechanized gold mining.

Danny Crumb of Atlin had a mining operation on Burdette Creek in the late 1960's, followed latter by Orin Anderson of Alberta and others. These operations were short lived, primarily because the geomorphology of the creek is not conducive to mechanized placer mining. More recently Lance Fuller of Atlin carried out very limited work, until dropped his claims in late 2016.

Atlin is essentially "off the grid" and ideal location for venture tourism. At present Atlin offers primarily fishing, hiking, biking and house boating.

In 2015 the author incorporated a BC company, *Atlin Gold Fields Geotours Inc.* to offer placer mine tours, wild life, and geological tours including non-mechanical gold mining, such as sluicing and panning on virgin ground.

In the opinion of the author, Burdette Creek offers one of the best placer creeks in the Atlin Camp for venture hand mining tourism.



Photo 3: Local Residents from Atlin enjoying a few hours hand mining and sluicing on Burdette Creek.

### **Regional Geological Setting**

The geology of the Atlin area is divisible into two distinct litho-tectonic elements. A structurally higher, imbricated sequence of oceanic crustal and upper mantle lithologies termed *the 'Atlin Ophiolitic Assemblage'*, is tectonically superimposed over a lower and lithologically diverse sequence of steeply dipping to moderately dipping, tectonically intercalated slices of pelagic meta-sedimentary rocks with tectonized pods and slivers of meta-basalt, limestone, and greywacke termed the *'Atlin accretionary complex'*. Locally these rocks are intruded by the Middle Jurassic (Mihalynuk, and others 1992) calc-alkaline Fourth of July batholith and related quartz-feldspar porphyritic and melanocratic dike rocks.

The following two sections in italics are quoted directly Ash, Bulletin 108.

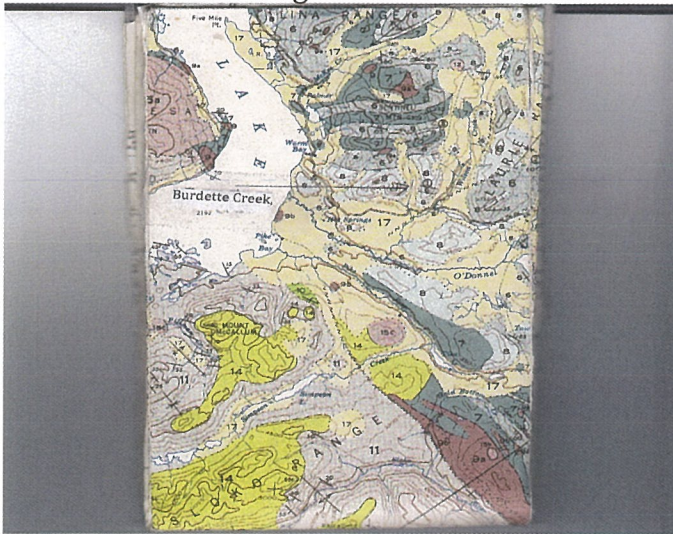
#### *Atlin Ophiolitic Assemblage*

The Atlin Ophiolitic assemblage comprises an imbricated sequence of relatively flat-lying, coherent thrust slices of obducted oceanic crustal and upper mantle rocks. Mantle lithologies are dominated by harzburgite tectonite containing subordinate dunite and lesser pyroxenite dikes. Oceanic crustal lithologies in the Atlin map area, in decreasing order of abundance, include metamorphosed basalt, ultramafic cumulates, diabase and gabbro with metabasalts dominating. Serpentinized peridotite displaying ghost cumulate textures and sporadically preserved relict

poikilitic texture is suspected to originally be wehrlite.

### *Atlin Accretionary Complex*

The Atlin Accretionary complex comprises a series of steeply to moderately dipping and folded lenses of structurally intercalated meta-sedimentary and meta-volcanic rocks that underlie the Burdette watershed. Pelagic meta-sedimentary rocks dominate the unit and consist of argillite, cherty argillites, argillaceous cherts, and banded (bedded) cherts. They range from highly mixed zones with well-developed flattened fabric indicative of tectonic *mélange* to relatively coherent lenses. Individual lenses range from metres to several hundred metres in width.



Geology of Burdette Creek, After J.D. Aitkin, 1959

### **Local Geology**

The drainage channel of Burdette Creek flows more or less directly south over *Atlin Ophiolitic Assemblage* rocks and *Atlin Accretionary Complex* rocks.

Rock units of the latter strike east-west across the upper sections of the creek, and include Cache Creek Group chert, argillite, and other rocks (unit 6), basalt-and-site volcanic rocks, (unit 7), and limestone, (unit 8).

At the upper headwaters of the creek is a unit of the *Atlin Ophiolitic Assemblage*; in this case a potential listwanite altered serpentine rock, (Unit 9a).

The upper section of Burdette Creek has several easterly-westerly trending faults cutting across the creek valley.

Tentatively, placer gold found in Burdette Creek could be sourced to:

- A potential listwanite alteration zone of the headwaters
- East-west faults that traverse an upper section of the creek
- Burdette Creek channel potentially reflects a north-south fault system.

### **An Interpretation. Formation of Burdette Placer Gold Gravels.**

During the Tertiary Period, the Atlin area was part of the Taku Plateau, a gentle rolling surface with a mature drainage<sup>2</sup>.

Towards the end of the Tertiary Period, up lifting of several hundred feet, resulting in peneplanation of some mountaintops, similar to other areas of North Western America, likely elevated the Atlin region<sup>3</sup>. In the Atlin region, this would have caused down cutting of existing creeks, and erosion of exhumed gold deposits.

During the late Pleistocene Epoch, in North America the Wisconsin glaciation began 80,000 to 100,000 years before present, and is recognized as last major glacial event in North America.

Previous glaciations during the Pleistocene in North America are known as Illinoian, Kansan and Nebraskan, and Pre-Nebraskan (?).

Each of these Pleistocene glaciations is believed to have experienced interglacial warming periods.

Glacial tills and fluvial gravels observations by the author within Burdette Creek and other Atlin creeks suggest the following:

- A potential sudden period of warming, resulting in fast melting of Pleistocene glacial ice before or at the onset of the Wisconsin glaciation created a period of flash flooding.
- This high-energy water flows created rapid channel and valley slope erosion resulted in deposition of large boulders in sanding gravels directly on creek bedrock.
- These basal boulder gravels were sometimes, but not always, deposited with placer gold, magnetite, tin and rare macro platinum group minerals.

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<sup>2</sup> Trans. Roy. Soc. Of Canada Vo. 8, Sec. 4, 1890, pp. 16-17.  
U.S.G.S. Prof. Paper No. 45, 1906, p. 294.

<sup>3</sup> *ibid*



Photo#4. Family of Mr. Vallee occasionally helped to test gravels on Burdette Creek in 2018.

Within the Atlin camp, basal “pay zone” fluvial gravels can range up to 5 metres above bedrock in creeks. In general, these “Pay Zone” gravels can host significant large boulders of Nakina Formation andesite and basalt, which could have repeatedly pulverized gold bearing host rocks as they travelled down stream during pre-Wisconsin flash floods.

In many cases these basal “pay zone” fluvial gravels have been covered up wards to 25 metres of Wisconsin glacial fluvial gravels, glacial lake sediments, and glacial tills.

However in lower Burdette Creek, where testing was carried out under the authors supervision 2018, (and 2017), it appears the Wisconsin gravels and tills which cover the basal sandy-boulder gravels or “pay zone” are limited in thickness.

In selected sections observed by the author, on Burdette Creek Wisconsin “pay zone” gravels appear to have been exhumed, perhaps over the past 10,000 years.

### **2018 Manual Test Work on Burdette Creek.**

During 2018, two sluicing operations are recorded at UTM Sector 8v, 587834E/6582292N on tenure 1041164, and UTM Sector 8v 587930E/6582867N. Figure 3.



Photo#5. Mr. Robert Vallee, manual placer miner, panning on Burdette Creek.

For gold grade estimates, Mr. Vallee and his assistant Kenny Atlin, over a 15 day period, working a total 60 hours manually ran 250 half filled five gallon pails of creek gravels through a ½ inch grizzly sieve.

Work done by the author was not applied to estimate gold grade estimates of gravel,

Using hand shovels, a sluice box, and Honda WX10 water pump, the minus ½ fraction was sluiced and washed by Mr. Vallee and his assistant.

A Honda pump was used approximately one hour each working day. Its capacity is estimated at 126 liters a minute, using a 1.5-inch hose.

Gold recovery was then made by manually panning the washed concentrate. The final product, after 60 hours of recorded testing, was the recovery of 12 grams gold.



Photo #5: Mr. Robert Vallee, and assistant First Nation placer miner Kenny Atlin. Both men from Carcross, Yukon.

### **Calculation of Gold Grades.**

The five-gallon pails used for hauling “Pay Zone” gravels from source to sluicing operations are considered to hold five Imperial gallons, not five US gallons.

During the testing, the five gallon pails were rarely full, but half-full, to help manual lifting and carrying.

For the purpose of grade calculations, a total of 250 five gallon half filled pails, were



used to haul "Pay Zone" gravels, in this case would approximate 125 full pails.



Photo#6: 2018 Final gold product, 12 grams gold, after washing 125 full 5 gallon pails, 60 hours manual mining.

Calculation of 5-Imperial gallon pails to yards is based on the following calculation.

It is estimated a 7.48 US gallons in a cubic foot, or 27 cubic feet in a yard. Therefore by multiplication, there are 201.96 WE gallons in a cubic yard<sup>4</sup>.

Divided by 5 Imperial gallons = 40.392 imperial 5 gallon pails  
= 1 cubic yard of gravel

By rounding to 40 pails, 125 five full gallon pails= 3.125 cubic yards.

From 3.125 cubic yards of "Pay Zone" gravels 12 grams placer gold was recovered.

Therefore, 1.0 cubic yard=  $(12/3.125)$ = 3.84 grams gold

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<sup>4</sup> Google

Thus, accepting an 80% confidence limit, certain channel banks on lower Burdette Creek; placer gold grades could be as high as 3.072 grams per cubic yard.

This compares favorably with 2017 estimates, using the confidence limits then concluded selected Burdette Creek gravels could be as high 4.8 grams per cubic yard.

The average for both years therefore is 3.936 grams/yard at 80% confidence limits.

In addition to the 3.125 "Pay Zone" gravels sluiced, an estimated 1-yard waste gravel was also removed.

#### **Data Verification**

The author personally knows Mr. Vallee to be a highly professional laboratory technician and serious amateur placer gold miner. The above data is accepted at 80% confidence limit.

#### **Adjacent Placer Properties**

Wilson Creek  
O'Donnel River  
McKee Creek

#### **Other Relevant Data**

During the work period, the BC. Mines Inspector Douglas Flynn from Smithers suggested to the author, even though no mechanized mining was planned or taking place on Burdette Creek by the author and his helpers suggested the author file a Notice of Work, (NOW) for record and monitoring purposes.

Burdette Creek officially lies within the Blue Canyon Zone, which is part of The Wóoshtin wudidaa Atlin Taku Land Use Plan<sup>5</sup> is a Regulated Mining Zone, (RMZ) for mechanized mining purposes.

#### **Interpretation and Conclusions.**

The accumulated panned gold was reported by Mr. Vallee to weigh 12 grams gold.

During 2018, using a Confidence Limit of 80%, a grade of 3.072 grams gold per cubic yard is calculated from selected gravels on lower section of Burdette Creek.

This compares favorably with 2017 estimates, calculated then to be 4.8 grams per cubic yard.

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<sup>5</sup> 2011


The average for both years therefore is 3.936 grams cubic yard

**Recommendations**

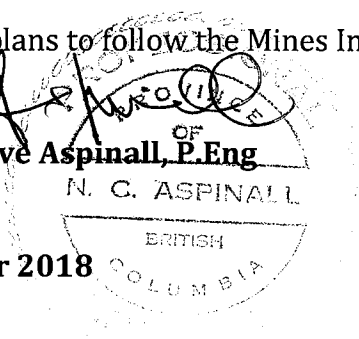
The author hopes Burdette Creek will become a future destination for venture gold seeking tourism.

Continued geological observations will also be made, in addition to working on creek geology map.

The author plans to follow the Mines Inspector's advice, and file a Notice of Work.

  
**Nicholas Clive Aspinall, P.Eng**  
**Geologist**

**12<sup>th</sup> October 2018**



## References

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**Citations**

Wóoshtin wudidaa Atlin Taku Land Use Plan 2011.  
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Zagorevski, A., Paper 2015-1  
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Appendices

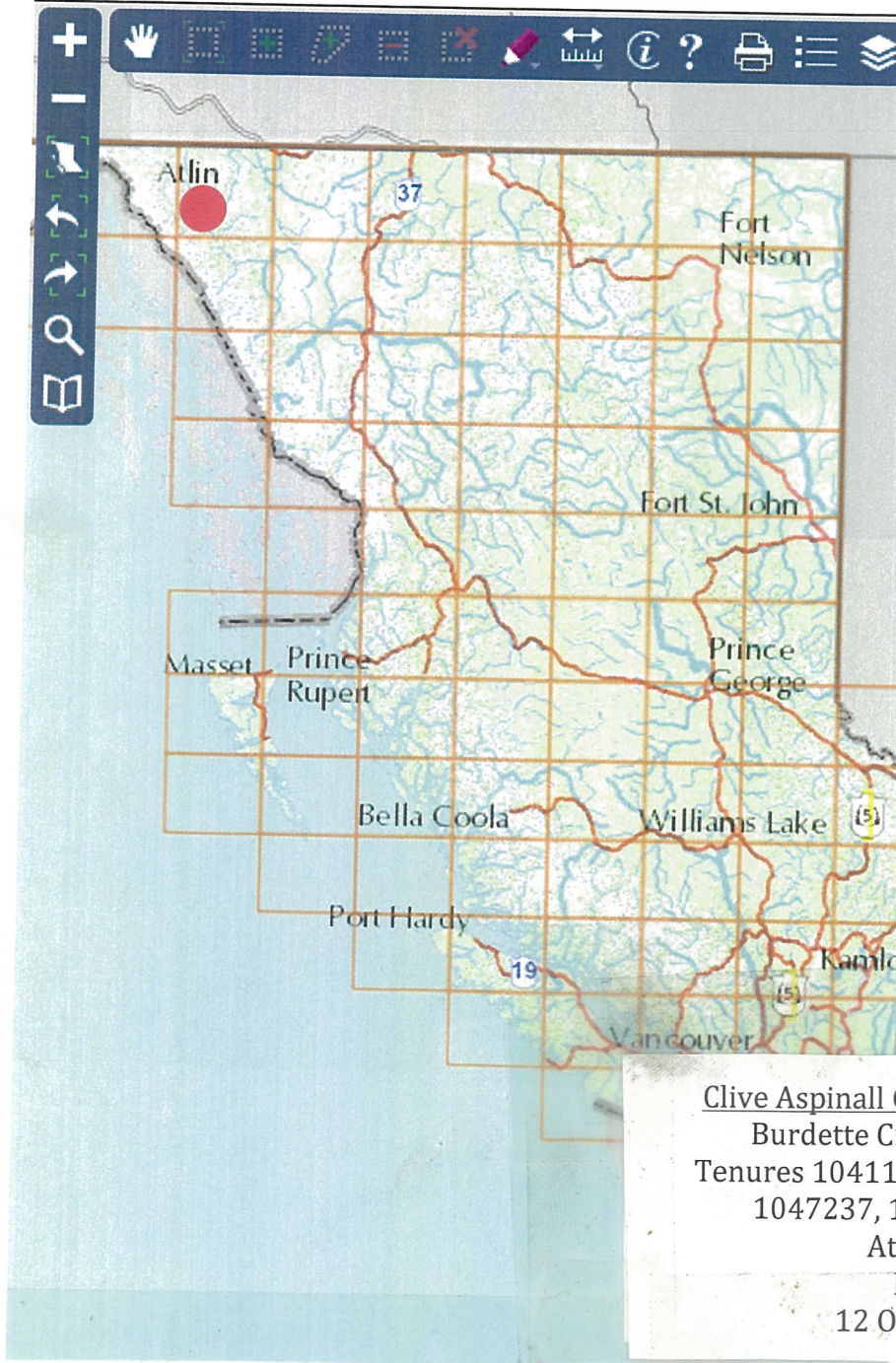
Figures

MTO Map



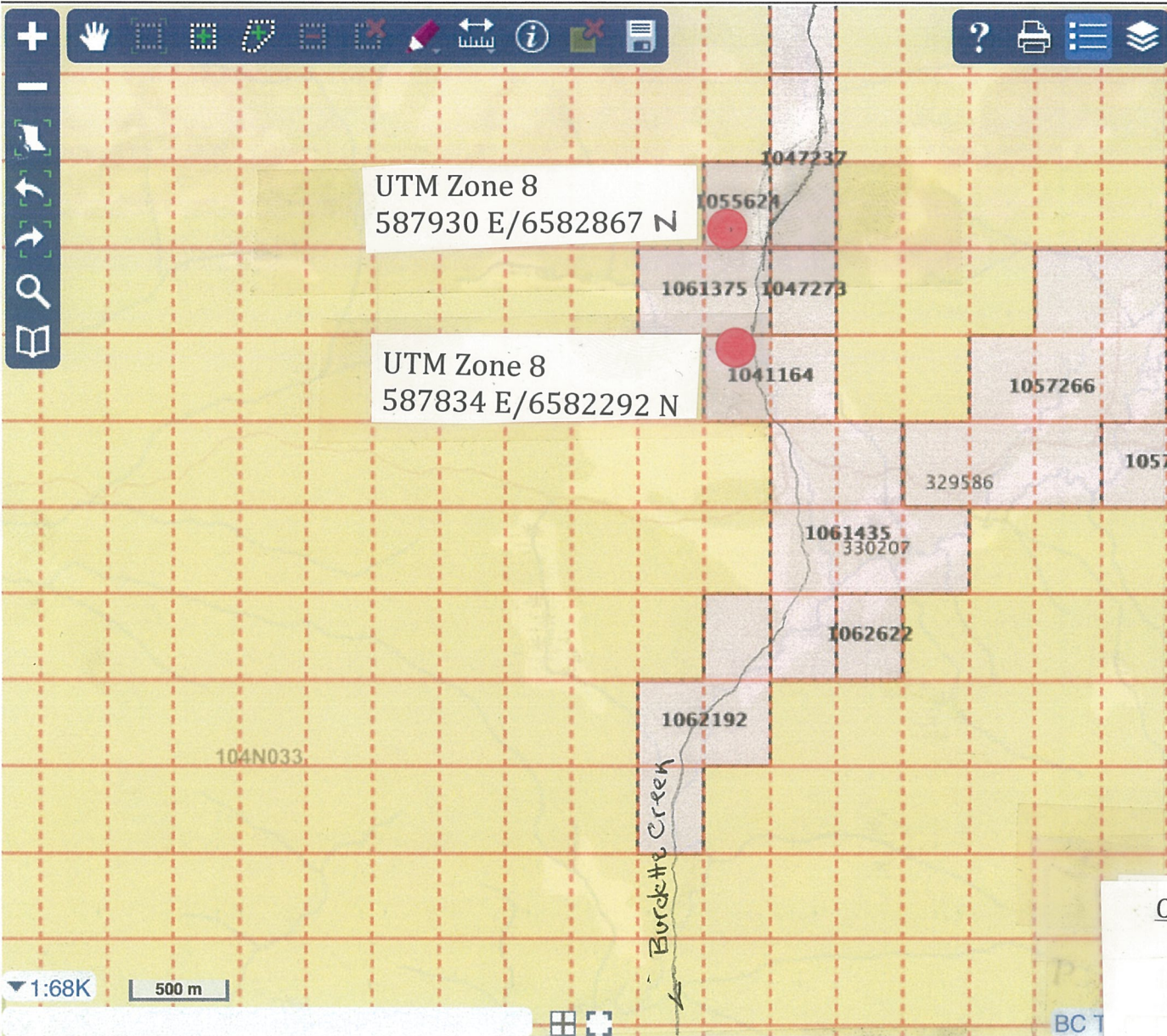
BRITISH COLUMBIA

Mineral Titles Online





# Mineral Titles Online



## Placer Claim Acquisition

### Legend

#### Placer Titles (MTO)

Title (current)

LEASE

CLAIM

Reserves

No Registration

Conditional

Heritage/Historic Site

Placer Claim Areas

Placer Claim and Lease Areas

#### Crown Land Layers (Tantalis)

Land Act Survey Parcels - Tantalis - Legal Descriptions

Label Text

Land Act Survey Parcels - Tantalis - Outlined

Clive Aspinall Geological Consultants

Burdette Creek Placer Project

Tenures 1041164, 1055624

Atlin MD BC

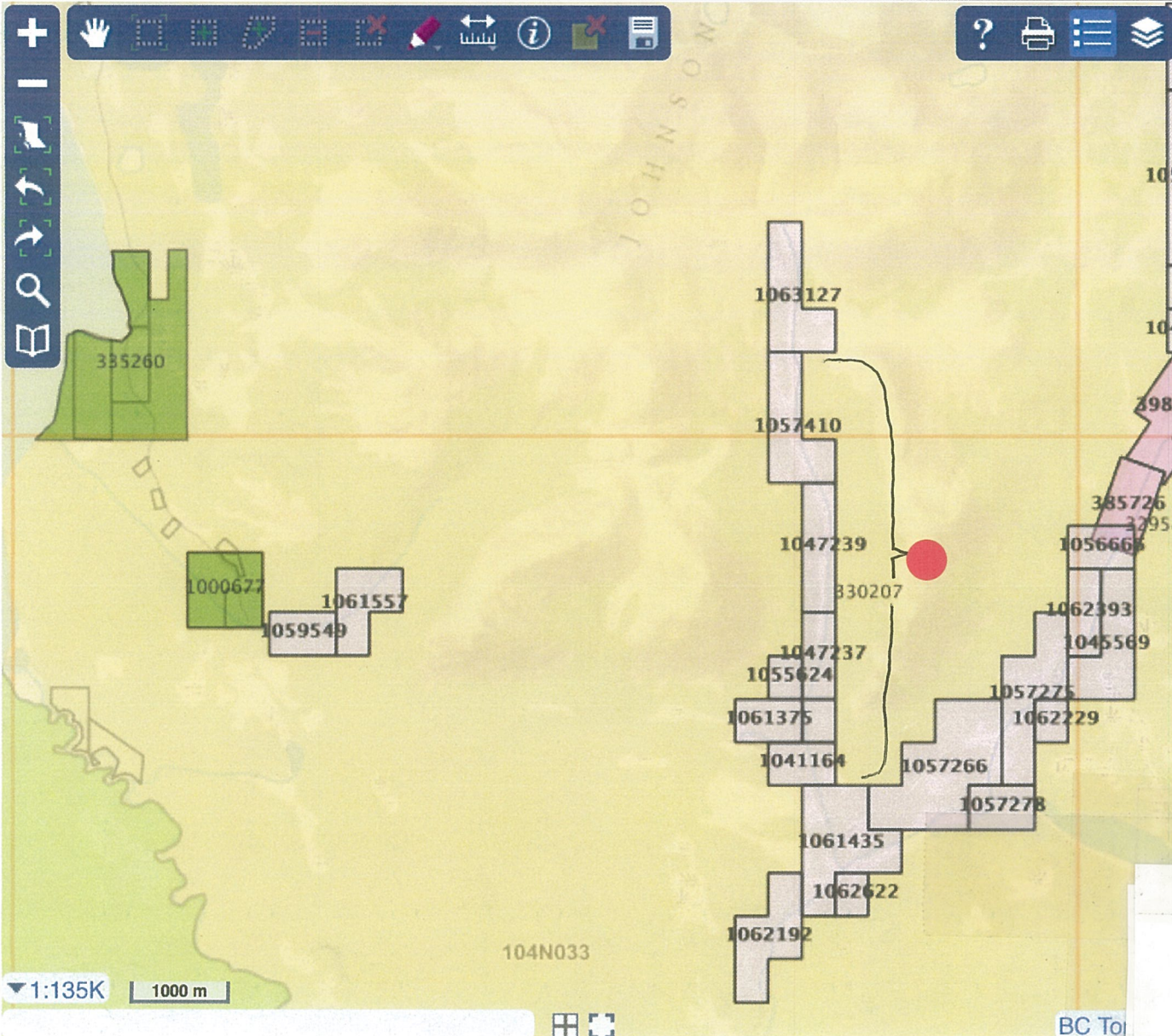
Figure 3

12 October 2018





# Mineral Titles Online



## Placer Claim Acquisition

### Legend

#### Placer Titles (MTO)

105 Title (current)

LEASE

CLAIM

Reserves

104 No Registration

Conditional

198- Heritage/Historic Site

Placer Claim Areas

Placer Claim and Lease Areas

#### Crown Land Layers (Tantalis)

Land Act Survey Parcels - Tantalis - Legal Descriptions

Label Text

Land Act Survey Parcels - Tantalis - Outlined

Clive Aspinall Geological Consultants  
 Burdette Creek Placer Project  
 Tenures 1041164, 1055624, 1047273  
 1047237, 1047239, 1057410

Atlin MD BC

Figure 2

12 October 2018

**Assessment Work Costs**

2018 Burdette Creek Work on Placer Claim Tenures 1041164, 1055624 Atlin MD					
Irregular Field Days, 28th May 2018 to 6th September 2018					
Personnel	No hours	Work days	Rate/hr.\$	Rate/day	Total \$
Robert Vallee, Placer miner	60		30		\$1,800.00
N.C Aspinall, Geologist	6		100		\$600.00
Vehicle Rent +gas		16	30		\$630.00
ATV		5	100		\$500.00
Mining Equip		15	20		\$150.00
Camp+Meals		15		50	\$750.00
Report, Geologist		2		800	\$1,600.00
<b>Total</b>					<b>\$6,030.00</b>
Mr.Vallee: 28, 29, 30 May; 3,4, 5, 24, 25 June, 17, 18, 19 August, 3, 4, 5, 6 Sept'18 NC Aspinall: 6 September 12, 13 October 2018: Kenny Atlin time not included.					

### Certificate of Authorship

I, Nicholas Clive ASPINALL, P.Eng of Pillman Hill, the community of Atlin British Columbia, do hereby certify that:

I am an independent consulting geologist with offices at the above address.

I am a graduate of McGill University, Montreal, Quebec, with B.Sc. degree in Geology (1964), and a Masters degree (1987) from the Camborne School of Mines, Cornwall, England, in Mining Geology.

I am registered member in good standing of the Associations of Professional Engineers and Geoscientists in the province of British Columbia.

I have practiced mineral exploration for 53 years since graduation from McGill University. I am familiar with the regional geology of the Atlin Mining Division and I have had an office based in Atlin since 1968.

I have worked in the following provinces of Canada and internationally; Newfoundland, Ontario, Quebec, British Columbia & Yukon; Libya, Morocco, Saudi Arabia, Yemen, Indonesia, Mexico, Peru, Argentina & USA.

I have title 100% to placer tenures 1041164, 1047237, 1047239, 1055624, 105710, covered in this report

I am the author of Assessment Report: Event 5711793  
2018 Manually Testing and Estimates of Gold in Gravels on Placer Claim Tenures  
1041164 and 1055624 Burdette Creek, Atlin MD, Centered at 59 deg 19.796' N and  
133 deg 28.753' W on T8 104A Dated 12 October 2018.

  
Nicholas Clive Aspinall, P.Eng  
Geologist

12<sup>th</sup> October 2018

