

Event  
Number: 5594451

PROSPECTING AND GEOLOGICAL ASSESSMENT REPORT OF TENURE 1035125  
ORCA2, PLACER CLAIM, MCKINLEY CREEK, ATLIN MD, BC, LOCATED AT:

59 deg. 32.797' N ., 133 deg 09.561' W, ( UTM 8v 604 060 E / 6602362 N NAD 83)  
BCGS MAP 104N055 NTS 104/11E



Placer miner and owner Orca2 placer claim, on site, August, 2015

Date field Work: 12 August 2015 to 23 August 2015

Date Recording work with MTO: 10<sup>th</sup> March 2016

Date Report: 15<sup>th</sup> March 2016

REPORT BY:

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

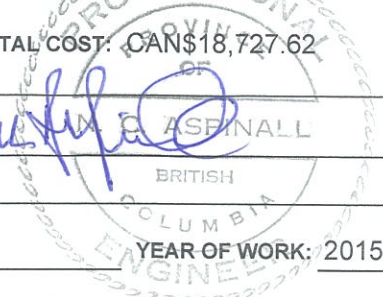
**Assessment Report**  
**Title Page and Summary**

TYPE OF REPORT [type of survey(s)]: Event Number: 5594451

TOTAL COST: CAN\$18,727.62

AUTHOR(S): NICHOLAS CLIVE ASPINALL, P.ENG

SIGNATURE(S): 



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

STATEMENT OF WORK - CASH PAYMENTS EVENT NUMBER(S)/DATE(S): Event Number: 5594451

PROPERTY NAME: ORCA#2; TENURE 1035125

CLAIM NAME(S) (on which the work was done): ORCA#2, TENURE 1035125

COMMODITIES SOUGHT: PLACER GOLD

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN: \_\_\_\_\_

MINING DIVISION: ATLIN

NTS/BCGS: 104N055 NTS 104/11E

LATITUDE: 59 ° 32.79 ' \_\_\_\_\_ " LONGITUDE: 133 ° 09.56 ' \_\_\_\_\_ " (at centre of work)

OWNER(S):

1) EDWARD J. WAELPOEL

2) \_\_\_\_\_

MAILING ADDRESS:

103-131 Mohr Ave, Spruce Grove, Alberta, T7X 2J5

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

1) AS ABOVE

2) \_\_\_\_\_

MAILING ADDRESS:

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

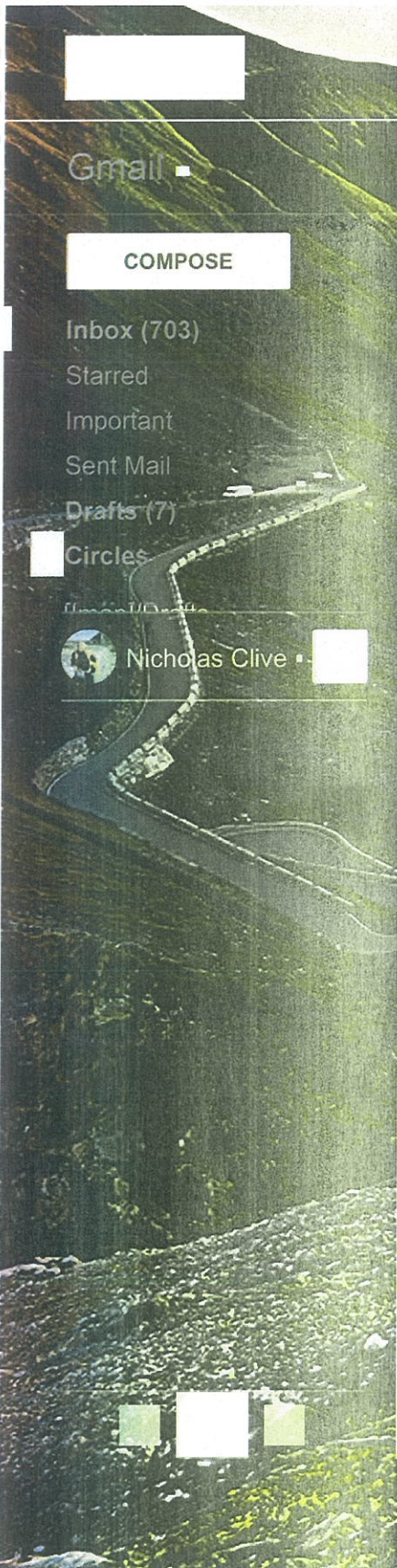
Cache Creek Group rocks, Atlin Terrane, Upper Paleozoic in age, chert, basalt andesite, and meta sediments; Surprise Lake

Batholith, Cretaceous, Alaskite, potash perthitic feldspar, plagioclase feldspar, quartz, porphyritic uncrowded, crowded textures.

F-rich (0.27%), U-rich (14.6 ppm), peraluminous granite, 664 sq km.

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS: Diakow, S.G., (2014). Prospecting Report on the Nos. 1021738 and 1028084, McKinley Creek, Atlin Area, Atlin Mining Division, British Columbia

THIS REPORT	(IN METRIC UNITS)		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		ORACA#2;TENURE 1035125	
Petrographic			
Mineralographic			
Metallurgic			
<b>PROSPECTING (scale, area)</b>			
<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 13 sites gold pan tested, 2 sluice tested			
<b>TOTAL COST:</b>			<b>CAN\$18,727.62</b>



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COMPOSE

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Important

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Circles

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Nicholas Clive

# SOW-P (5594451) 2016/MAR/10 14:5:30 Mineral Titles Online Confirmation

Inbox x

MT.Online@gov.bc.ca

2:05 PM (27 minutes ago)

to eddy.v78 me

This email is to confirm submission of the following Mineral Titles Online

5594451

Event Number: 5594451

Event Type: SOW -- Exploration and Development Work / Expiry Date C

Recording Date: 2016/MAR/10

Title Type: Placer Claim

Owner(s): WAELPOEL, ED J ( 78610), 100.0%

Event Detail: [gov.bc.ca](http://gov.bc.ca) [gov/eventDetail](http://gov.bc.ca/eventDetail)

Work Type Description: Technical Work

Physical Items: Geological, Prospecting

### Financial Summary:

Total Required Work Amount: \$18467.32

PAC Name: ED WAEL POEL

PAC Debit: \$0.00

PAC Credit: \$260.30

Total Submission Fees: \$0.00

**Event  
Number:** 5594451

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## SUMMARY

The Orca 2 placer claim, tenure 1035125 covers 246.14 ha. on McKinley Creek, Atlin Mining Division, British Columbia.

Between 12 August-23 August 2015, claim owner Ed Wael Poel carried out a 6 day onsite prospecting and stream testing program, in preparation for a more detail claim investigation in 2016.

In August 2015, the claim owner also contacted the writer, N. Clive Aspinall, P.Eng, to be his agent, and compile the following assessment report.

Testing was completed in August 2015. It is believed the Tertiary Period placer gold with Tertiary gravels were shed into McKinley Creek valley system, possibly sourced to the Cretaceous Surprise Lake Batholith.

The Surprise Lake Batholith outcrops immediately to the north of McKinley Creek.

Potential bulk auriferous gravels could now lie below an estimated 15-20 metres of Wisconsin age fluvio-glacial deposits in some sections of McKinley Creek .

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## **Introduction and Terms of Reference**

The report is written on behalf of Edward J. WaelPoel (FMC#278610), of 103-131 Mohr Ave, Spruce Grove, Alberta, T7X2J5.

The report covers a first year prospecting and geology program between 12 August-23 August 2015, on placer claim Orca2 Tenure 1035125 covering 246.14 ha, Atlin MD-BC, Figures 1, 2.

In this report the subject claim will simply be referred to as Orca2.

Orca2 is located approximately 30 km east of the community of Atlin, BC. Prospecting work consisted of claim reconnaissance and stream pan testing gravels 13 sites, and sluicing gravels at 2 sites on McKinley Creek

Field work was carried out by Mr. WaelPoel and one assistant.

Although the writer took no part in this creek testing, the writer is familiar with the gravels and geology of McKinley Creek and general area from past un-related surveys, which qualifies him to discuss the geology.

## **Reliance on other Experts**

- Ms. Anke Woodworth, Terracad GIS Services Ltd. 675 West Hastings Street, suit 310, Vancouver, BC, V6B 1N2.
- Discovery Helicopter Pilot Norm Graham
- Assessment reports pertinent to the area were accessed via B.C. Mineral Titles Data assessment report system, (ARIS).
- Review of N.Clive Aspinall Assessment reports.
- Review of geological maps and geological reports and papers by J.D Aitkin, Chris H. Ash and M. Mihalynuk, A. Zagorevski of the federal and provincial governments.

## **Work Area Description and Location**

Orca2 lies within the Atlin gold camp, a historic gold camp since 1898. This camp falls within the traditional territory of the Taku River Tlingit First Nations, Ref: Figure 1.

Orca2 is located approximately 30 km east of the community of Atlin

Orca2 is centered at coordinates 59 deg. 32.797' N., 133 deg 09.561' W, (UTM8v 604 060 E / 6602362 N NAD 83), covers part of McKinley Creek and valley. Orca 2 is titled to Edward J WaelPoel, FMC#278610.



**Table 1: Orca2 Details.**

Title Number:	1035125
Title Type:	Placer Claim
Claim Name/Property:	ORCA2
Issue Date:	2015/mar/31
Old Good To Date:	2016/mar/31
New Good To Date:	2019/DEC/31
Number of Days Forward:	1370
Area in Ha:	246.1413
Title Required Work Amount:	\$18,467.32
Title Submission Fee:	\$0.00

New good date to be approved by MTO.

**Accessibility, Climate, Local Resources, Infrastructure and Physiography**

Atlin is the most northerly community in British Columbia. This community is accessible from Whitehorse, by the Alaska Highway and the Atlin road; a distance of 180 km. Atlin also lies east of the Coast Range Mountains and 140 kilometers of Juneau, Alaska.

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

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

McKinley Creek where Orca2 is located is a Northeast tributary of at the headwaters of O'Donnell River. The creek follows a distinctive NE trend suggesting it to be a reflection of a NE-SW trending fault lineament.

From its junction at it's southern end with O'Donnell River NE to its headwaters it has a creek channel of approximately 10 km. in length. Generally, the creek channel is less then 5 metres wide, generally less than 2 metres deep during spring flow, with a variable flood plain of less than 300 metres wide.

McKinley Creek valley has an elevation approximating 1200 metres ASL, with Mount Dixie on the West and "Mount Todd" on the East both peaking at 1700 metres ASL.

The work area falls within semi-alpine terrain, with dwarf-birch predominating in the 2 km wide lower valley area, giving way to more typical alpine terrain on the steep slopes of the surrounding mountains. Scattered conifers prevail in local areas.

Orca2 can be accessed by ATV or 4 wheel drive vehicle from Atlin, by following the Spruce Creek-Blue Canyon placer trail, Fig. 2. The direct distance is 30 km, but the

trail distance is longer; depending on mode of transport, a 2 or 3 hour time is required to access the end of the trail on McKinley Creek, which comes to an abrupt stop 350 metres SW of Orca2 southern claim boundary. The rest of the journey can be made on foot, or breaking exploration trails using ATV.

The region's climate is typical of northern British Columbia with winters averaging minus 15 ° 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 of 20° C with variable precipitation. Total annual precipitation averages 279.4 millimeters of moisture.

Moose caribou, black bear, beaver, marten foxes and wolves are indigenous to the region. Grizzly bear appear to favour this area over other areas in the Atlin region, (*author's opinion*).

### **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 by a source in Juneau, Alaska). They confirmed paying gold on Pine Creekin January 1898. As news spread, othergold 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 1946 was 634,147 ounces. At today's price, this would range to \$788 million.

From the mid-1960 to mid-1970, the author's observations are that placer mining in the Atlin camp was mainly small scale and carried out by Atlin resident miners. The foot print of this work was environmentally friendly, with some mining being supported by hydraulic monitors, especially on McKee Creek.

When heavy equipment moved into the Atlin gold camp during summer months in the 1970's annual gold production is believed<sup>1</sup> to have increased substantially, which also meant a larger foot print.

The demographics of the miners also changed to non-Atlin residents, mainly outsider families from Alberta, Vancouver, Vancouver Island, and more recently from Whitehorse. Since 2013, TV "show" mining has also become active in Atlin.

The focus of this mining is on Pine Creek, Ruby Creek and Otter Creek. Heavy equipment placer mining is active to this day, with the Author's opinion of increasing placer gold production.

The author estimates some 30,000 ounces of placer gold were taken out of creeks in

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<sup>1</sup> By the Author

the Atlin camp in 2015, predominantly from Upper Otter Creek. During 2014, the author estimates 20,000 ounces gold were recovered.

Tin, silver and platinum is known to be also present in some Atlin creeks, albeit in small quantities. These minerals are not normally collected by the placer miners.

McKinley Creek is basically the last frontier for placer gold exploration in the Atlin gold camp.

A placer trail leads to McKinley Creek, leading from the Spruce Creek-Blue Canyon trail. This trail extension to McKinley Creek may have been constructed in part by Bud Berg,<sup>2</sup> who also excavated a small trench at the end of the trail, about 350 metres south of Orca2 placer claim.

No other records are readily available on McKinley Creek, until 2013 and 2014 when a prospecting party of two men, (Ed J. WaelPoel, S.G. Diakow) prospected two placer claims, (Orca, tenure 1021738, and SGD tenure 1028084)<sup>3</sup>.

According to Diakow's assesment report<sup>4</sup>, 14 panned samples were examined, of which 13 carried gold colours. It is reported these panned samples were collected from gravels within the creek itself, rather than the banks, suggesting McKinley creek gold is actively on the move.

Until about 2010, the **Taku River Tlingit First Nations**, (Atlin is officially recognized as TRTFN traditional territory, Fig 1.) were never actively too concerned about Atlin placer mining. However, over the past six years, the TRTFN are taking a much more active roll in monitoring placer mining in the Atlin camp.

All permitting has to go through their office before approvals are signed off, but the Mines Inspectors office in Smithers, in most cases, has the final word.

During 2015, the TRTFN, University of Northern British Columbia, and the government sponsored a reclamation study on most historic Atlin placer mine operations.

### **Regional Geological Setting of McKinley Creek, Atlin Terrane**

McKinley Creek lies with Cache Creek Group Terrane, which comprises an imbricated stack of Paleozoic chert, basalt andesite, and meta-sediments.

Within the McKinley Creek valley, associated limestone, gabbro and ultramafic rocks, elsewhere found in the east of the Atlin gold camp, have not yet been observed by the author.

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<sup>2</sup>Diakow, S.G., 2014

<sup>3</sup> ibid.

<sup>4</sup> ibid

Most of the rock bodies in the Cache Creek Group Terrane are lensoidal and discontinuous, features that are in part primary depositional and in part due to later deformational events.<sup>5</sup>

A large circular batholith, approximately 664 sq km in area, known as the Surprise Lake batholith, outcrops at the headwaters of McKinley Creek. Cretaceous in age, the predominant host rocks are known as alaskite to the author. <sup>6</sup> Mineral make up is generally potash perthitic feldspar and plagioclase feldspar, and quartz, often exhibited in variable textures.

Rocks are highly differentiated, showing graded grain sizes, ranging from coarse to fine grained, equigranular, F-rich (0.27%), U-rich (14.6 ppm), presenting a typical peraluminous granite (Ballantyne and Littlejohn, 1982). These rocks are often intruded by fine grained aplitic dikes. Pegmatitic textures are present.

The batholith is host to relatively rare quartz-vein stockworks, with mineralization to include W, Mo, U, F, and Sn, with less dominant Pb-Zn-Cu sulphides, and analytical Au, and Ag.

### **Local Geology**

The following two sections quote Ash, Bulletin 108, with modifications by the author in italics.

Geology of the Atlin Terrane 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, 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, in addition to the Cretaceous Surprise Lake Batholith.

Only rocks of the Atlin Accretionary complex are outlined here, as these dominate in McKinley Creek Valley, although scattered glacial rock fragments of the *Atlin Ophiolitic Assemblage* are deemed present.

### *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 McKinley Creek area. Pelagic meta-sedimentary rocks dominate

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<sup>5</sup>Monger, J.W.H.

<sup>6</sup> After Aitkin, J.D, 1959

the unit and consist of argillite, cherty argillites, argillaceous cherts, and banded cherts. They range from highly mixed zones with well-developed flattened fabric indicative of tectonic mélangé to relatively coherent lenses. Individual lenses range from metres to several hundred metres in width. Indications of stratigraphy are well preserved in the banded cherts. Contact relationships between many individual lenses within the McKinley Creek area have not been established due to lack of detailed geological work by the author.

### **Geomorphology**

During the Tertiary Period, Atlin Terrane was a gentle rolling surface with mature peneplain geomorphology<sup>7</sup>. Peneplanation of mountain tops is evident in the Mount Sanford area east of Atlin, and the Mount Lawson area to the west of Atlin, as well as to the north in the Yukon.

Towards the end of the Tertiary Period, Atlin Terrane was rapidly uplifted by an assumed several hundred feet, similar to other areas of North Western America. In the Atlin Terrane, this would have caused down cutting of existing creeks, erosion of exhumed gold deposits, and shedding of placer gold into the waterways.

Black, in his 1953 report, observes (*italics*):

*This (uplift) resulted in down cutting of streams, and reworking of stream Gravel deposits, and a re-concentration of gold and other heavy minerals in, on, and near bedrock.*

*At that time gravel deposits probably occurred on all the creeks of the area but the gold content must have varied depending on the distance from the source of the gold and on the nature of the creek channel.*

But these processes took place before the last glacial period, the Wisconsin.

About 80,000 years before present, the Wisconsin ice age began.

Evidence indicates this glacial period had a profound affect on the geology and geomorphology of the Atlin area primarily in creating U-Shaped valleys, eskers, minor cirques, and rock glaciers.

This combination of geological events, prior uplift, rapid erosion, and then the Wisconsin glacial event, may have eroded away the original source of placer gold source in the Atlin region.

As observed by Black, (1953) a detailed examination of events during the Wisconsin Ice Age is necessary for an understanding of the distribution of placer deposits in the area.

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<sup>7</sup>Trans. Roy. Sot. of Canada Vo. 8, Sec. 4, 1890, pp. 16-17.  
U.S.G.S. Prof. Paper No. 45, 1906, p. 294.

### **Mineral Content of Atlin Gravels Reflecting a Potential Gold Source**

In 1959, the Geological Survey of Canada published the Atlin Map-Area memoir by J. Aitken that included a comprehensive synopsis of placer mining activity in the Atlin camp. About the source of the gold, Aitken (1959) concluded: "...it is significant that many acres of bedrock in the most favourable area have been stripped in the course of placer mining without a single promising vein being uncovered.... It appears likely, therefore, that the known lodes of the area and perhaps some of the multitude of barren quartz veins are the roots of lodes, now completely eroded, that may have been the Source of the placer gold".

A more contemporary view by Ash (2001) is more specific about the host lithologies, suggesting an ophiolitic association, but he comes to essentially the same conclusion: "The placers are considered to be derived from quartz lodes previously contained within the ophiolitic crustal rocks."(Page 25).

If gold in the Atlin placer camp bears an association with altered ultramafic rocks, it is not borne out in the juvenile gold placers of Feather Creek, 2 km West of McKinley Creek, Fig 2. On the contrary, ultramafic or listwanite clasts were not identified by Sack and Mihalynuk, (2003) in Feather Creek placer gravels. They also noted Feather Creek placer gold to be typically hackly, sometimes almost filigree in form, suggesting a proximal source.

Atlin gold generally exhibits semi-rounded smooth nuggets, often flattened, ranging from macro size, to less than a gram to 62 ounces and more. These nuggets are sometimes associated with quartz, including magnetite. Auriferous pyrite is also present in some cases, in addition to silver, and platinum.

A large circular batholith, approximately 664sq km in area, is known as the Surprise Lake batholith, outcrops at the headwaters of McKinley Creek. Cretaceous in age, it is essentially the predominant host rocks known as alaskite to the author.

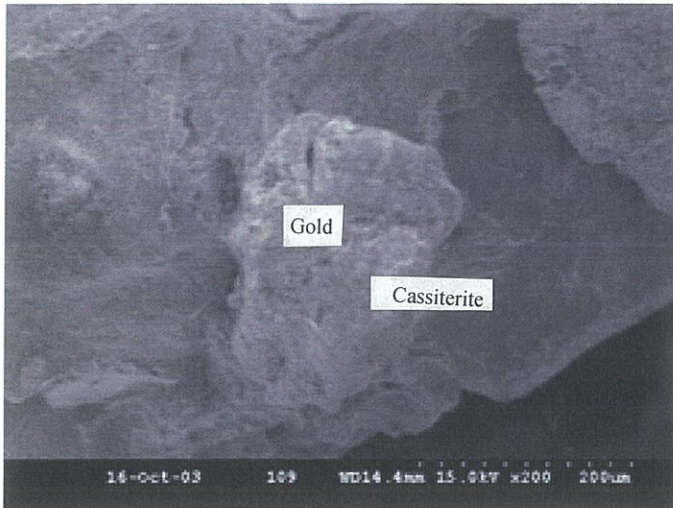
This large batholith, which out crops at the head of McKinley Creek, has the potential to be the original source of placer gold on that creek. During the Cretaceous period, when the batholith intruded older Cache Creek rocks, likely had an auriferous carapace within selected surfaces. This carapace likely contaminated the overlying and adjacent Cache Creek rocks.

Tin, (cassiterite, Sn) is one of the standard trace minerals within the batholithic rocks. Electron scanning Studies (SEM), in conjunction with an attached Energy Dispersive X-Ray Spectro Scope attached, (EDS) studies on six gold samples collected from adjacent Feather Creek studied by Sack a Mihalynuk in 2003 indicated tin (SnO<sub>2</sub> cassiterite), on the surface of four these samples<sup>8</sup>. Thorite was also detected, and this would be typical

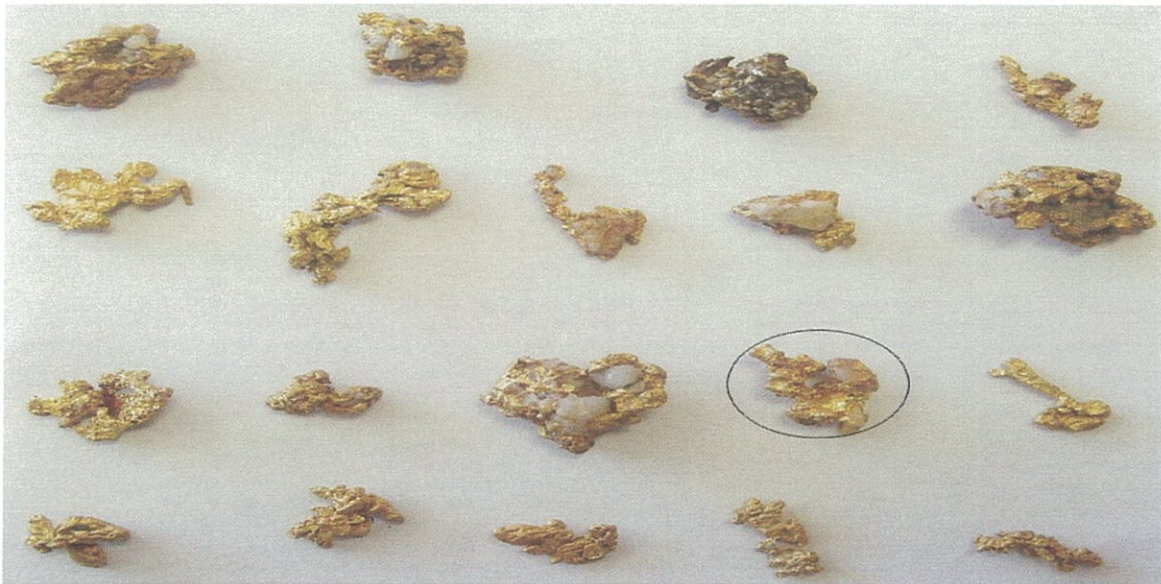
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<sup>8</sup> Sack, P.J., and Mihalynuk, M, G., 2003.

radio active mineral of a peraluminous batholith, such as the Surprise Lake Batholith.



SEM photomicrograph and EDS spectrum of tin-oxide (Cassiterite), with thorium (Thorite) on a Feather Creek gold nugget (Sample PSA03-1-4)<sup>9</sup>.



Representative crystalline and hackly gold from Feather Creek which indicates either a proximal source, or transport in clasts that released the gold near its point of recovery<sup>10</sup>

### **2015 Exploration; Sampling Method.**

Assessment work in 2015 consisted of, 1) a one hour helicopter reconnaissance to video access and parts of McKinley Creek, 2) the panning of gravels at 13 sites on Orca 2, 3) including 2 sites of sluicing operations.

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<sup>9</sup>ibid

<sup>10</sup>ibid

In addition, a permit in 2015 was applied with the BC. Ministry of Mines for 2016 work, (not included as 2015 assessment work).

Locations of 2015 panning and proposed 2016 work are outlined in Ref: Figure, 4, 3 respectively.

Discussions with Mr. WaelPoel advised that material panned and sluiced came from gravels in McKinley Creek itself. This suggests the panned gold recovered in 12 of the 13 samples was actually from gravels and gold on the move.

In the author's opinion, had Mr. WaelPoel panned samples from the actual banks of McKinley Creek, recovered gold values could have been higher, because the creek banks collect gold over time.

Two sites were set up for sluicing on McKinley Creek, with positive colour results. However, locations of these sites were not recorded.

Results of the 13 panned samples are recorded below, in Table 2.



Table 2.

McKinley creek August 2015 test pan results

<u>Coordinates</u>	<u>Colors</u>
P1 N-59° 32.241' W-133° 10.234'	8
P2 N-59° 32.263' W-133° 10.206'	5
P3 N-59° 32.206' W-133° 10.226'	2
P4 N-59° 32.328' W-133° 10.204'	9
P5 N-59° 32.450' W-133° 09.946'	2
P6 N-59° 32.450' W-133° 09.944'	2
P7 N-59° 32.468' W-133° 09.870'	5
P8 N-59° 32.480' W-133° 09.910'	1
P9 N-59° 32.481' W-133° 09.910'	2
P10 N-59° 32.518' W-133° 09.835'	1
P11 N-59° 32.548' W-133° 09.818'	0
P12 N-59° 32.558' W-133° 09.768'	1
P13 N-59° 32.569' W-133° 09.707'	1
P4 Sluice-1	10
P4 Sluice-2	7

-P = Pan

-P4 Sluice-1 was 4 5 gallon buckets 2/3 full run through a small high banker at the same coordinates as P4 and P4 Sluice-2 was the same except across the creek

-Gold varied in size but would all be considered small but noticeable by the eye

-There was about 6 sand grain sized pieces of quartz with gold on them

-There were 3 flakes that ranged in size from 2 to 5 mm long to 2 to 3 mm wide

**Drilling**

No drilling was carried out for the Orca2 claim during 2015

**Data Verification**

The author was not on site when above panned and sluiced samples were collected, so cannot independently verify the above results.

**Adjacent Properties**

- 1) Blue Canyon.
- 2) Otter Creek
- 3) Upper O'Donnell, including Feather Creek.

Upper Otter Creek is by far the most productive gold producer in 2014/15.

**Fineness Testing Orca2 Gold**

During 2015 no metallurgical work were conducted on gold recovered on Orca2 to determine fineness.

**Placer Gold Reserve Estimates**

No mineral resource or reserve estimates were made in 2015, since this survey is in pre-discovery status

**Other Relevant Data**

To the best author's knowledge there is no further relevant geological/panning/sluicing data within or immediately adjacent to Orca2 other than those already mentioned in this report.

**Interpretation and Conclusions**

Given the proximity of Feather Creek, 2 km to the west, is likely McKinley Creek has similar properties, and that gold on Feather Creek, (including Upper O'Donnell), and McKinley Creek is sourced to the original Surprise Lake Batholith carapace, which has now been completely eroded.

**Recommendations**

An Exploration permit for Orca2 has already been submitted to the BC Ministry of Mines Inspector Office in Smithers, with copies and sent to the Taku River Tlingit First Nations. Dialogue with the Taku River Tlingit has been on going since 2014.

This permit applied for twenty-one excavator pits on lower Orca2, Figure 3, in conjunction with sluicing and gold panning of gravels from the pits.

It is also recommended all waste after all panning in the field be collected into special holding containers, (buckets) for further microscopic analysis and shaker table processing to capture all remaining gold fines, including the possibility of tin, silver, nickel and platinum content, not detected in the field.

There is a shaker table plant in Atlin.

A two to three week test pitting program is planned to August 2016.

**Table 3**

Proposed Budget, Orca2, McKinley Creek, Atlin MD., BC.			
Personnel	No. Days	Rate	Total\$
Chief Prospector	21	650	13,650.00
Assistant	15	300	4,500.00
Consultant (Agreed Rate)	15	350	5,250.00
<b>Items</b>			
Doohan Excavator	15	850	12,750.00
6 wheel Ranger	15	140	2,100.00
Sluice Box	21	200	4,200.00
Accommodation/meals	21	190	3,990.00
<b>Other</b>			
Diesel	15	150	2,250.00
Gasoline	6	150	900.00
Geological Report	10	350	3,500.00
Drafting maps			500.00
<b>Total</b>			<b>53,590.00</b>

  
**Nicholas Clive Aspinall, P.Eng**  
**Geologist**  
**15<sup>th</sup> March 2016**



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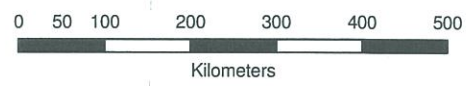
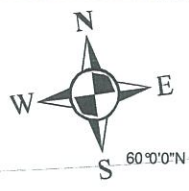
U.S.G.S. Prof. Paper No. 45, 1906, p. 294.

Zagorevski, A., Paper 2015-1

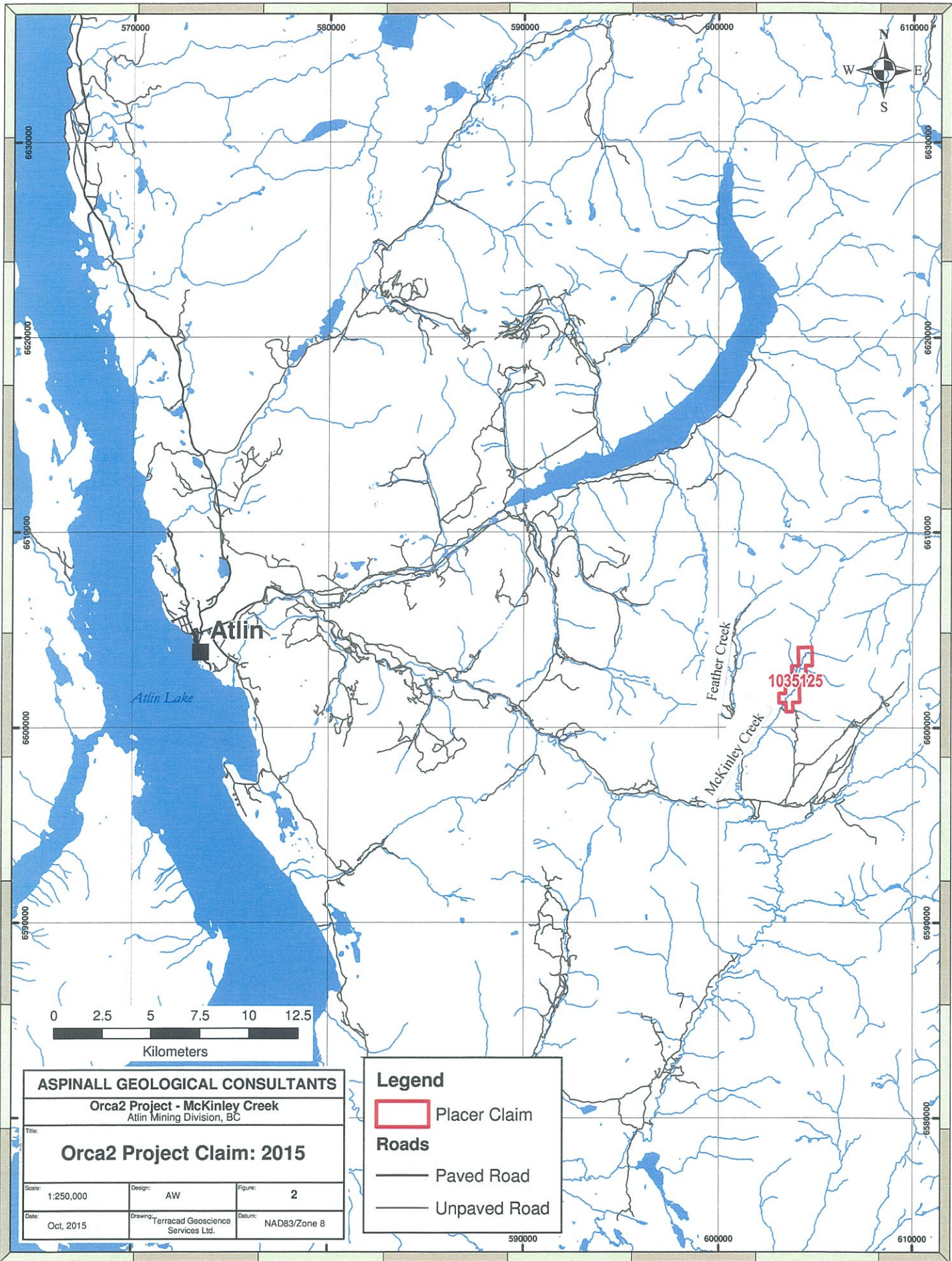
**Appendices**

**Figures**





<b>ASPINALL GEOLOGICAL CONSULTANTS</b>		
<b>Orca2 Project - McKinley Creek</b>		
Atlin Mining Division, BC		
Title:		
<b>Project Location in British Columbia</b>		
Scale:	Design:	Figure:
1:8,500,000	AW	1
Date:	Drawing:	Datum:
Oct 2015	Terracod Geoscience Services Ltd.	Long/Lat



**ASPINALL GEOLOGICAL CONSULTANTS**

**Orca2 Project - McKinley Creek**  
Atlin Mining Division, BC

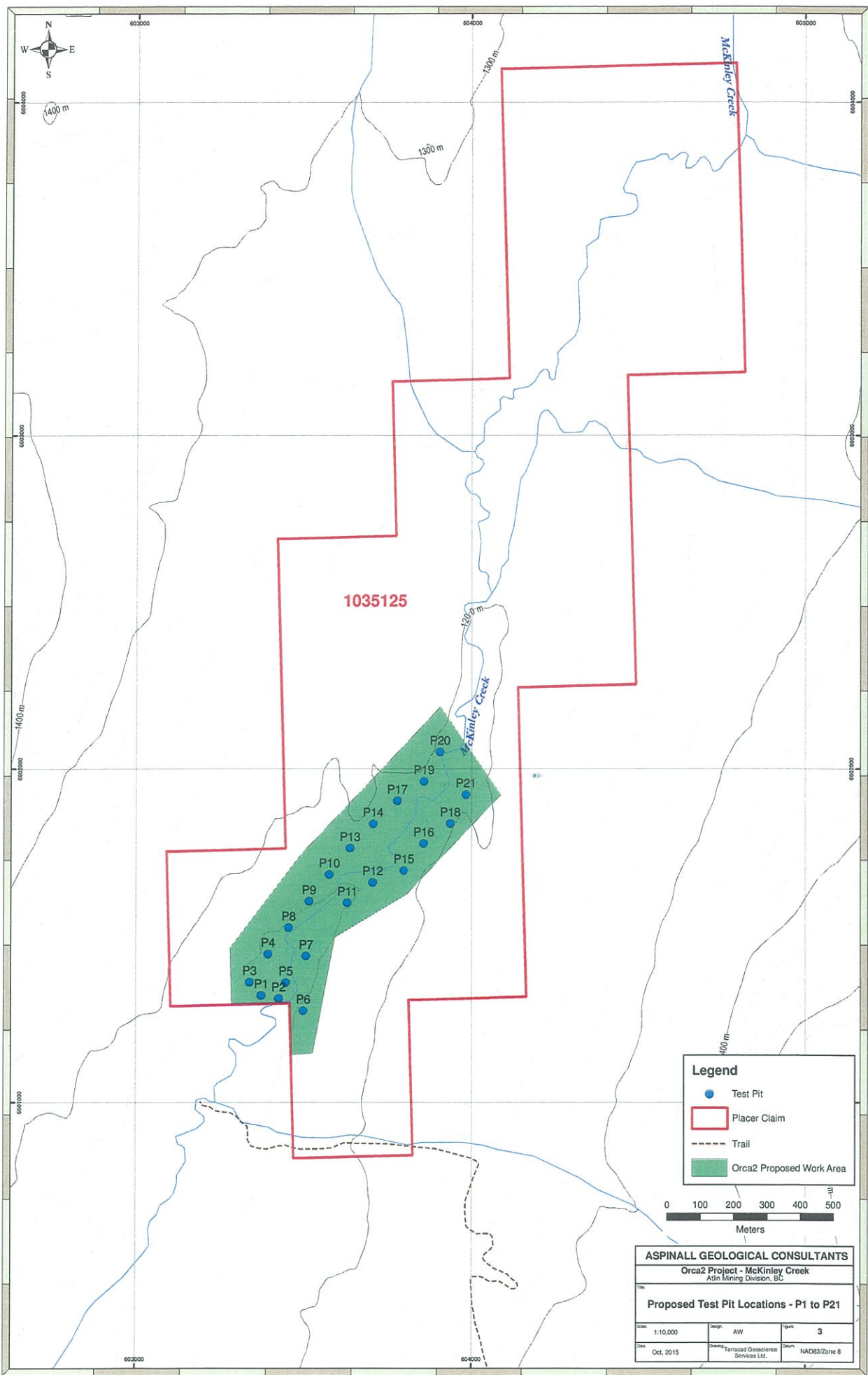
Title:  
**Orca2 Project Claim: 2015**

Scale: 1:250,000	Design: AW	Figure: 2
Date: Oct, 2015	Drawing: Terracad Geoscience Services Ltd.	Datum: NAD83/Zone 8

**Legend**

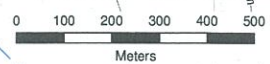
- Placer Claim
- Roads**
- Paved Road
- Unpaved Road

590000 600000 610000

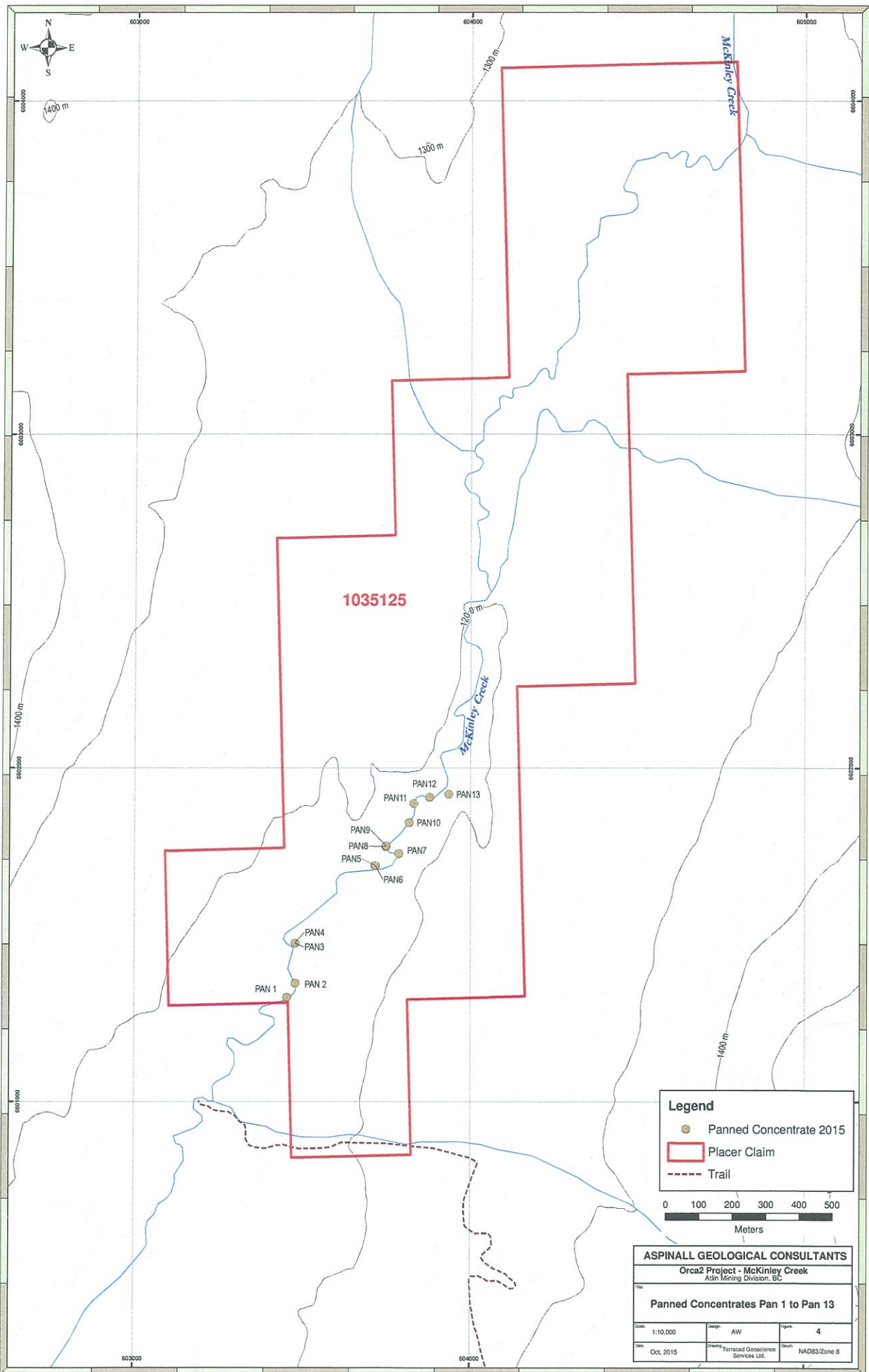


**Legend**

- Test Pit
- Placer Claim
- - - - Trail
- Orca2 Proposed Work Area

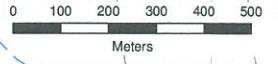


<b>ASPINALL GEOLOGICAL CONSULTANTS</b>		
Orca2 Project - McKinley Creek Atlin Mining Division, BC		
<b>Proposed Test Pit Locations - P1 to P21</b>		
Scale: 1:10,000	Design: AW	Figure: 3
Date: Oct, 2015	Drawn: Terrance Goodwin Services Ltd.	Datum: NAD83/Zone 8



**Legend**

- Panned Concentrate 2015
- ▭ Placer Claim
- - - Trail



**ASPINALL GEOLOGICAL CONSULTANTS**  
 Orca2 Project - McKinley Creek  
 Altn Mining Division, BC

**Panned Concentrates Pan 1 to Pan 13**

Scale: 1:10,000	Design: AW	Pages: 4
Date: Oct. 2015	Drawn: Terrad Geoscience Services Ltd.	Datum: NAD83/Zone 8

**Photographs, Orca2, McKinley Creek, During 2015**



**Photo#1:** Digging gravels for panning



**Photo#2:** McKinley Creek, August 2016 flow Rate



**Photo#3.** Cross country at McKinley Creek using Ranger 6 by 6



**Photo#4:** Mckinley Creek, Looking south.

**Table #4. Cost Statement**

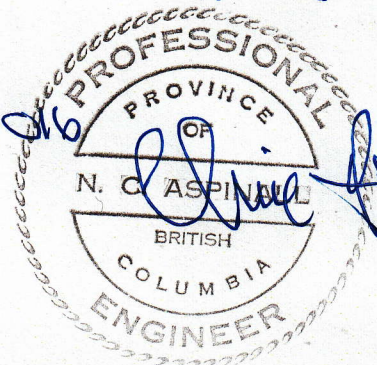
2015 WORK EXPENSES Tenure#1035125, McKinley CREEK ATLIN MD		Total \$
ED WAELPOEL, PROSPECTOR	12 DAYS @\$650 DAY	7,500.00
ASSISTANT PROSPECTOR	4 DAYS@\$300 DAY	1,200.00
<b><u>MOB/DEMOB</u></b>		
<del>SPRUCE GROVE ALBERTA</del>		
<del>ATLIN BC, RETURN</del>	<del>6 DAYS FUEL</del>	<del>1,034.12</del>
<del>MEALS/ACCOMMODATION</del>	<del>6 DAYS@\$180/DAY</del>	<del>1,080.00</del>
<del>ENROUTE</del>		
<b><u>RENTALS</u></b>		
VEHICLE	12 DAYS@\$150.00 DAY	1,800.00
RENTAL 6 BY 6 RANGER	4 DAYS@\$140 DAY	560.00
SAT PHONE	7 DAYS@\$30 DAY	210.00
HIGH BANKER SLUICE	12 DAYS@75 DAY	900.00
GPS	12 DAYS@\$30 DAY	360.00
<b><u>ACCOMMODATION/MEALS</u></b>		
ATLIN, BC	6 DAYS@\$180 DAY	1,080.00
<b><u>AIR CHARTER</u></b>		
DISCOVERY HELICOPTERS	1 HOUR	1,255.81
<b><u>CONSULTANT, P.ENG</u></b>		
ASSESSMENT REPORT, SCANNING		1,560.00
MAPS FOR ASSESSMENT REPORT		187.69
<b>TOTAL</b>		<b>18,727.62</b>

Total

\$16,613.<sup>50</sup>/<sub>100</sub>

Revised

9th July, 2016



**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 50 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 no material interest in the Orca 2 Placer Claim, on McKinley Creek, Atlin MD, and BC.



I am the author of Report:

**Event  
Number:** 5594451

PROSPECTING AND GEOLOGICAL ASSESSMENT REPORT OF TENURE 1035125  
ORCA2, PLACER CLAIM, MCKINLEY CREEK, ATLIN MD, BC, LOCATED AT:  
59 deg. 32.797' N., 133 deg 09.561' W, (UTM 8v 604 060 E / 6602362 N NAD 83)  
BCGS MAP 104N055 NTS 104/11E

15<sup>th</sup>March, 2016

Originally Signed by



NICHOLAS CLIVE ASPINALL, M.Sc. P.Eng.  
Geologist