

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)]: Placer sampling & prospecting

TOTAL COST: \$16,300

AUTHOR(S): John Kemp **SIGNATURE(S):** _____

NOTICE OF WORK PERMIT NUMBER(S)/DATE(S): N/A - hand work **YEAR OF WORK:** 2016

STATEMENT OF WORK - CASH PAYMENTS EVENT NUMBER(S)/DATE(S): 5592618 (Acquisition of 1042391) & 5619874 (Acquisition of 1046922)

PROPERTY NAME: O-Donald

CLAIM NAME(S) (on which the work was done): O Donald (1042391) & Hi-Country (1046922)

COMMODITIES SOUGHT: Placer Gold

MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN: N/A

MINING DIVISION: Atlin **NTS/BCGS:** 104N044

LATITUDE: 59 ° 25 ' 03 " **LONGITUDE:** -133 ° 14 ' 22 " (at centre of work)

OWNER(S):
1) John Kemp 2) _____

MAILING ADDRESS:
Box 98
Telkwa, BC V0J 2X0

OPERATOR(S) [who paid for the work]:
1) John Kemp 2) _____

MAILING ADDRESS:
As above

PROPERTY GEOLOGY KEYWORDS (lithology, age, stratigraphy, structure, alteration, mineralization, size and attitude):
Atlin Terrane, Stikine Terrane, Cache Creek Group

Structure: Thrust & tear faults; O'Donnel thrust

Mount McMaster stock, sediments, chert, basalt

Placer Gold

REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT REPORT NUMBERS: None

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
GEOLOGICAL (scale, area)			
Ground, mapping			
Photo interpretation			
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic			
Electromagnetic			
Induced Polarization			
Radiometric			
Seismic			
Other			
Airborne			
GEOCHEMICAL (number of samples analysed for...)			
Soil			
Silt			
Rock			
Other 19 Bulk Samples		1042391	\$7,620.00
DRILLING (total metres; number of holes, size)			
Core			
Non-core			
RELATED TECHNICAL			
Sampling/assaying 12 Pan samples			\$3,100.00
Petrographic			
Mineralographic			
Metallurgic			
PROSPECTING (scale, area) 12 km2 - O'Donnel & tributaries			
PREPARATORY / PHYSICAL			
Line/grid (kilometres) 5 km			\$2,400.00
Topographic/Photogrammetric (scale, area)			
Legal surveys (scale, area)			
Road, local access (kilometres)/trail			
Trench (metres)			
Underground dev. (metres)			
Other			
TOTAL COST:			\$16,300.00

PROSPECTING and SAMPLING REPORT
for
0-DONALD PLACER PROPERTY
(1042391 & 1046922)

NTS 104N
Lat 59° 25' 03" N / Long 133° 14' 22"
(approximate centre of property)

Atlin Mining Division
British Columbia

Prepared by
John Kemp
Box 98
Telkwa, B.C.

February 10, 2016

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1 INTRODUCTION

The O-Donald claim, (Tenure# 1042391) was acquired on February 28 2016. A Notice of Work (NoW) for exploration activities was submitted on April 20, 2016. However, when no authorization was received by September 1st, 2016, a decision was made to conduct a non-mechanical assessment program to keep the claims in good standing, as the placer working season was nearing an end.

This assessment program consisted of prospecting all creeks entering the O'Donnel River in the claim block, as well as a hand sampling program of the area where the proposed drill program was to take place. Grid lines were established for control of sample locations.

Work was carried out from September 10th to October 10th, 2016. An additional claim was acquired (Tenure# 1046922), on September 26, 2016, as a result of prospecting and sampling.

Authorization for the April 20 NoW exploration program was received mid-October; too late in the season to initiate the program. The drilling and test pit program, approved under Mines Act permit P-1-822, will commence in 2017.

2 PROPERTY DESCRIPTION AND LOCATION

The O-Donald property is centered at Latitude 59° 25' 03" N, Longitude 133° 14' 22" W. It encompasses 2 placer tenures covering a total claim area of 444.63 hectares.

The property is accessed from the community of Atlin, heading south on the Warm Bay road for 45 km to the O'Donnel River, then northeast along existing four wheel drive roads adjacent to the O'Donnel River. The southern boundary of the tenure is located ~4 km up from the junction of the road with the O'Donnel River.

Claim Information

Tenure #	Claim Name	# of Cells	Size	Good to Date
1042391	O-Donald	21	345.88 ha	February 28 /2017
1046922	Hi Country	6	98.75 ha	September 26 / 2017

All claims are held by John Kemp and are located within a designated placer area on Map NTS 104N.

The claims lie within the asserted traditional territory of the Taku River Tlingit First Nation and are located within the Blue Canyon Management Area of the Atlin-Taku Land and Resource Management Plan.

3 CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE, AND PHYSIOGRAPHY

The region's climate is typical of northern British Columbia with winters averaging -20° C in January with moderate snowfall. Winter conditions arrive approximately the middle of October, and continue until April. Summer temperatures average 20° C with variable precipitation. Annual precipitation averages 279 millimeters.

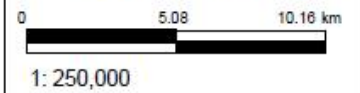
The town of Atlin, British Columbia, is the nearest community and is located ~60 km by road from the O-Donald property. Atlin has a fixed wing base and helicopter service, but has a limited supply of goods and services.

Relief in the O'Donnel River area ranges from 600 metres at Atlin Lake to mountainous areas of 2000 metres. The O'Donnel River valley is mostly bare of trees with the exception of thick willows. Road access was developed by past mining.



Figure 1

**O-DONALD
PLACER
LOCATION MAP**



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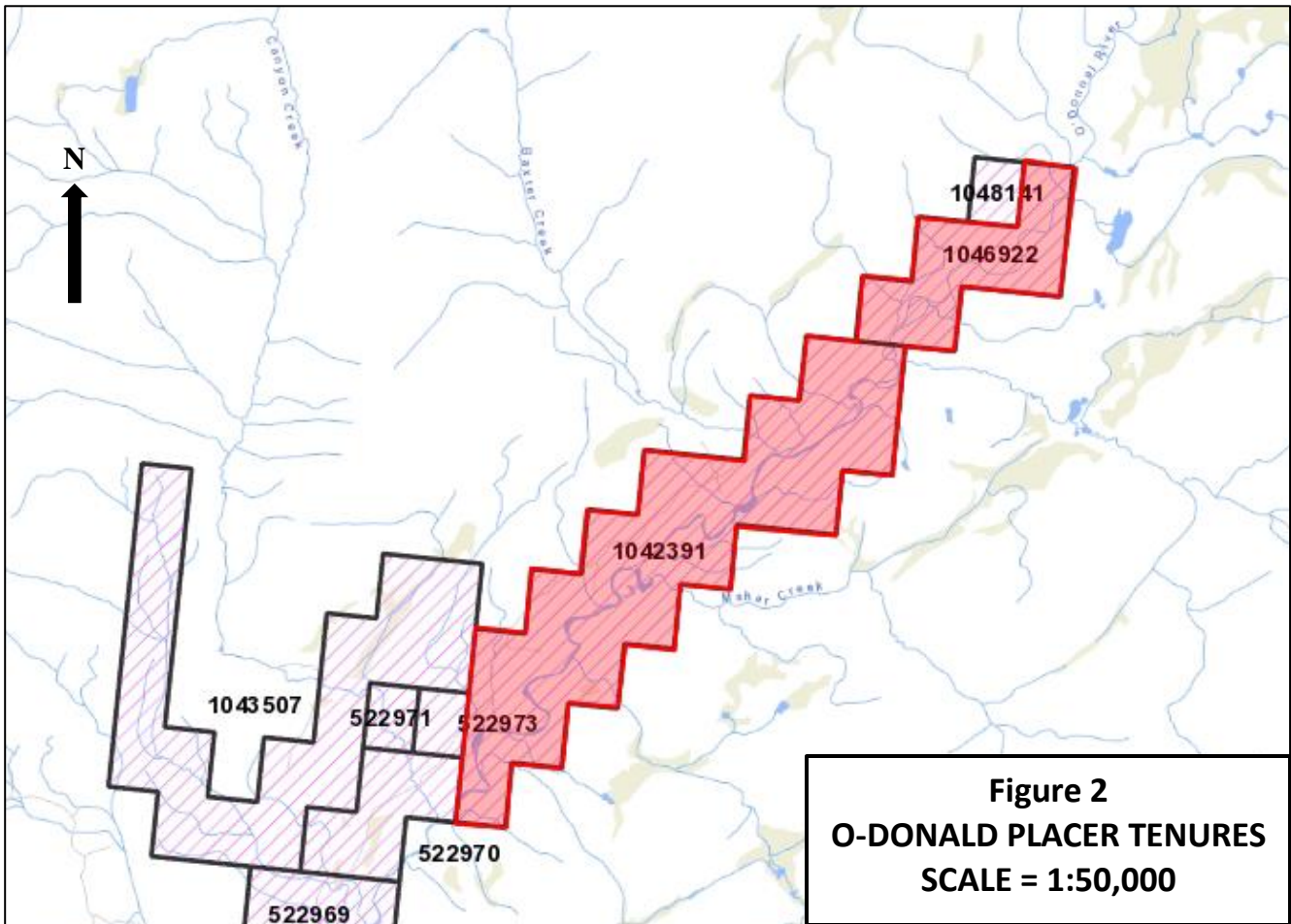
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Datum: NAD83
Projection: NAD_1983_BC_Environment_Albers

Key Map of British Columbia





4 HISTORY

The Atlin area has a long history of Placer exploration and mining that dates back to the late 1800's, with initial claims located by Miller and McLaren in 1898. The area encompassing the O-Donald claims has a somewhat more recent placer history than creeks located in the Atlin – Surprise Lake area.

Locally, on the O'Donnell River, (the former town site of O'Donnell), is the location that most of the placer operations in took place, with many old ditches, portals in the high gravel banks, water boxes for pressure monitoring of the gravel banks. Evidence of smaller working are present along the river bottom and at the mouth of some of the creeks flowing into the O'Donnell, as well as a number of old cabins.

There is no comprehensive reporting of overall gold recovery from the O'Donnell River, but some very rich patches are reported in the Annual Reports of the Ministry of Mines, record local high grade areas found in old workings in the central section, (O'Donnell Town site). Other than the central section, only limited work has taken place on the O'Donnell River.

References to the difficulty of mining are stated in Ministry of Mines Reports, including:

- Gentle grade of the river, referring to the removal of tailings, water for sluicing and hydraulicing;
- Ground water in shafts and portals (no pumps);
- Inability to follow pay channels (glaciation, or highly energized flood environment); and,
- Very deep overburden.

5 REGIONAL GEOLOGY

The area of interest lies entirely within the Intermontaine Belt and straddles the tectonic boundary between Atlin and Stikine terranes. The northwest-trending boundary is defined by the Nahlin fault. East of the Nahlin fault the area is underlain by Paleozoic clastic and volcanic rocks of the Cache Creek Group (Aitken, 1953, 1959; Monger, 1975).

Monger (1975) established a broad stratigraphic succession based on his work throughout the Atlin Terrane. Mississippian to Pennsylvanian basalt of the Nakina Formation is the basal unit of the succession. It is overlain by and inter-fingers with chert, clastic sediments, minor carbonate and volcanic rocks of the Kedahda Formation. These are in turn gradationally overlain by a thick carbonate sequence of the upper Permian Horsefeed Formation. Locally, Mesozoic clastic rocks unconformably overlie the Cache Creek Group (Aitken, 1959; Monger, 1975, 1977b). Ultramafic rocks, including serpentized Harzburgite, dunite and gabbro, range in size from linear bodies many tens of kilometres in length to pods and slivers a few metres in extent.

5.1 Local Geology

The O'Donnel River area is extensively underlain by a succession of Paleozoic Cache Creek clastic sediments consisting dominantly of fine-grained, locally siliceous mudstones, siltstones, and sandstone sometimes interbedded with minor impure chert. Massive limestone underlies an extensive area on the lower O'Donnel River (south) and on the upper O'Donnel River (northwest). In the middle section of the O'Donnel River, the west side is underlain by chert and siltstone, and on the east, more chert and siltstone that is in contact with the McMaster Pluton which varies from granodiorite to diorite.

Volcanic and ultramafic rocks are noted but not observed in the immediate area of interest.

5.2 Structure

Structures in the Dixie Lake map area, (104N/5 & 6), can be divided into three distinct groups; those east of the Nahlin fault in the Atlin Terrane, and those west of the fault in the Stikine Terrane, and structures along the Nahlin fault itself.

Faulting, rather than folding, is the dominant form of deformation in the Cache Creek rocks of the Atlin Terrane. The most prominent structural features of the map area are numerous low-angle thrust faults and associated tear faults.

Thrusts of all scales occur in the Dixie Lake map area. The three largest are the McKee, O'Donnel and Silver Salmon thrusts, which are named after the major drainages they follow. The curvature of their traces, structure measurements and strong air photo linears suggest that these large thrust faults dip gently northeast. (Monger, 1975. Mary Anne Bloodgood and Kim A Bellefontaine, *Geology of the Atlin Area*, paper 1-20, 1989).

5.3 Mineralization

Known mineral occurrences in the O'Donnel River area are limited to placer gold deposits. Small placer operations are active on McKee Creek, Wilson Creek and the O'Donnel River.

Quartz float was observed, associated with listwanite and pyrite, as well as pyrite in the sedimentary rocks on the gravel bars of the O'Donnel River.

Figure 3: Regional Geology Map

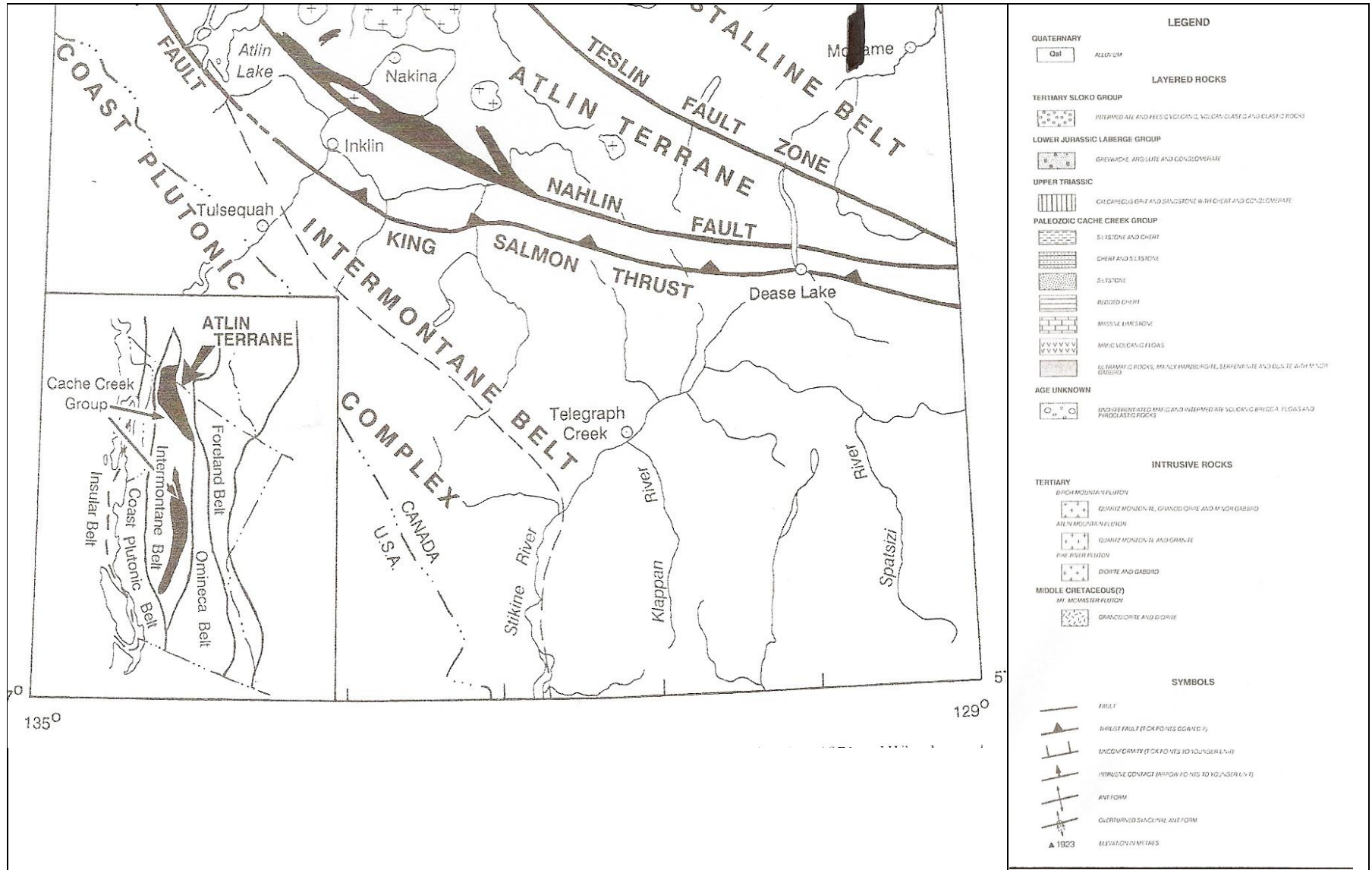
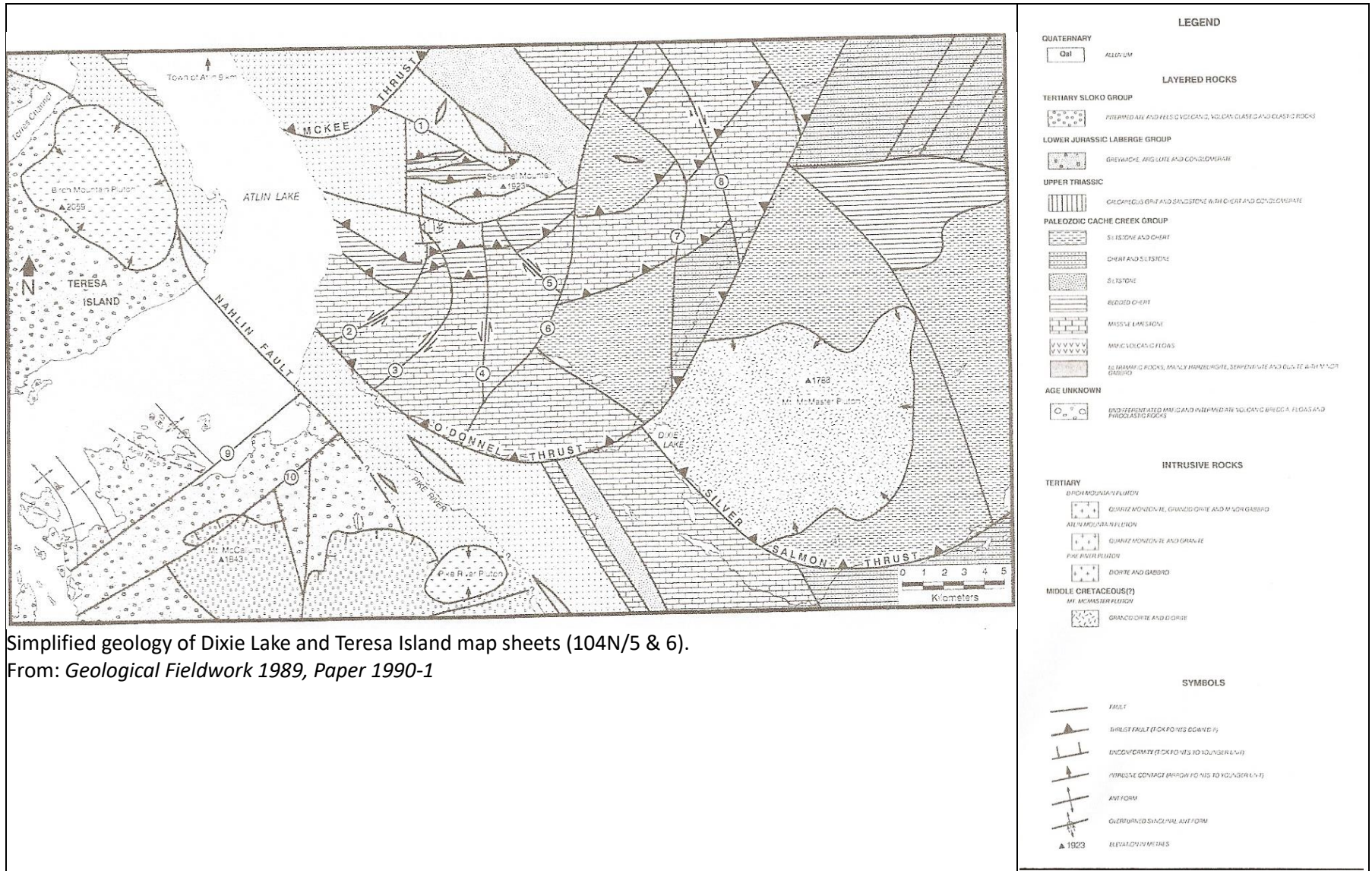


Figure 4: Local Geology Map



Simplified geology of Dixie Lake and Teresa Island map sheets (104N/5 & 6).

From: *Geological Fieldwork 1989, Paper 1990-1*

6 WORK PROGRAM

The work program on the O-Donald placer claims took place from September 20th, 2016, to October 10th, a total of 30 man-days, and consisted of the following;

6.1 Prospecting and Pan Sampling

Sampling of surficial material was conducted on both sides of the O'Donnel River. Sample locations were selected as far as possible from the O'Donnel River but still within the claim block.

A total of 12 sample locations (Psa-1 to Psa-12), were processed, with a minimum of two pans from each location. Gold panning equipment consisted of a standard 30 cm gold pan, pick and shovel.



Panned material consisted of stream gravel, and was washed down to fines. Coarse materials were examined for any mineralization, quartz and rock types; fines were examined for placer gold and black sand.

Gravels on the west side of the O'Donnel River, (from Baxter creek, north), are heavily coated with calcium. As sampling progressed to the north, boulders in the river appear to become coarser, and include more intrusive rock.

6.2 Grid Establishment and Bulk Hand samples

A total of 5 km of ribbon lines were placed for control of sampling and for drilling in 2017. Lines were mostly east / west but took advantage of open benches so as to not remove willows.

On the grid, 11 Bulk samples were collected (Lt-1 to Lt-11). An additional 8 samples (Lt-12 to Lt-19) were collected from random areas, for a total 19 samples collected.





Each bulk sample was collected in five - 25 litre pails, (30 pails = 1 metre) from a hand dug hole approximately a metre deep. Sample material was then transported by ATV to a site on the river and run through a long tom and then processed by panning.

Some quartz with pyrite was seen in some samples. Over 40% of the holes had ground water which makes for poor sample results. Results did show 6 holes on the grid with encouraging colours. Bedrock was not found in any sample location.

Random samples (Lt-12 to Lt-19) were taken from bench areas north of the grid and processed the same as grid samples.

Samples Lt-18 and Lt-19 were better than average and resulted in acquiring an additional claim.

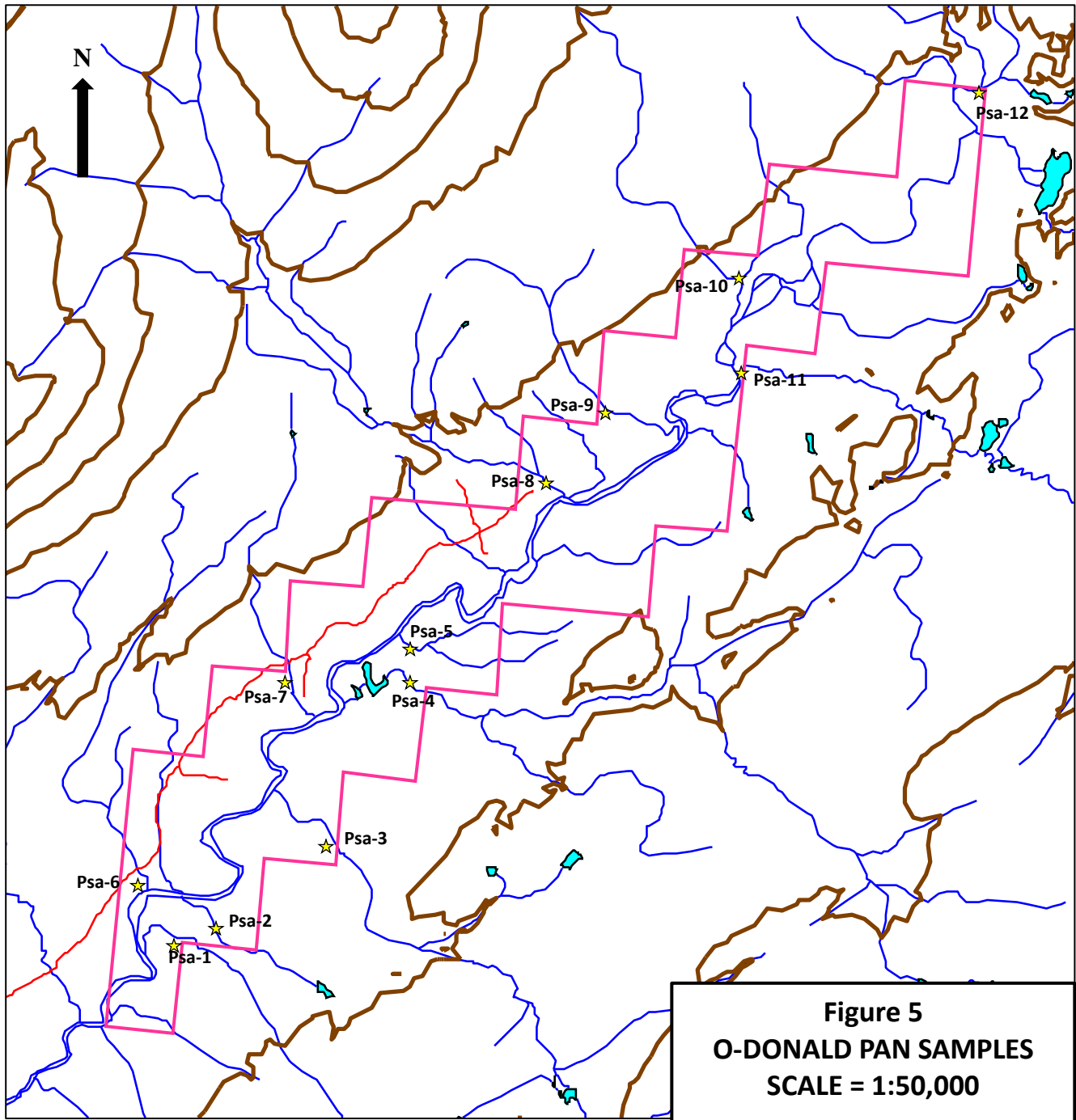
All holes were backfilled. The long tom test area was a water hole not adjoining the river, for settling silt.

One interesting area was on Mahar Creek (east side of the O'Donnel, Psa-4), was an old placer working. The old cabin, in very poor shape and water ditches for sluicing were still present. Research of Minister of Mines reports (1914) indicate this may be where the Fitzgerald brothers were drift mining.

7 SAMPLE LOCATIONS AND RESULTS

7.1 Pan Samples

Sample Number	Location UTM Coordinates	Comments
Psa-1	599593 / 6585883	Minor fine gold, Black sand, Quartz float in creek
Psa-1	599701 / 6586039	No gold, black sand
Psa-3	600272 / 6586456	Fine gold, black sand
Psa-4	600265 / 6587155	No gold
Psa-5	600625 / 6587491	Fine gold, small pin head nugget, black sand
Psa-6	599287 / 6586269	No gold, black sand
Psa-7	599951 / 6587180	Minor fine gold, no black sand
Psa-8	601073 / 6588404	No gold, calcium covered gravel
Psa-9	601250 / 6588637	No gold, calcium covered gravel
Psa-10	601939 / 6589470	2 Good Pans, 11 flakes & fine gold, black sand
Psa-11	602357 / 6589416	Minor fine gold, black sand
Psa-12	603020 / 6590198	No gold

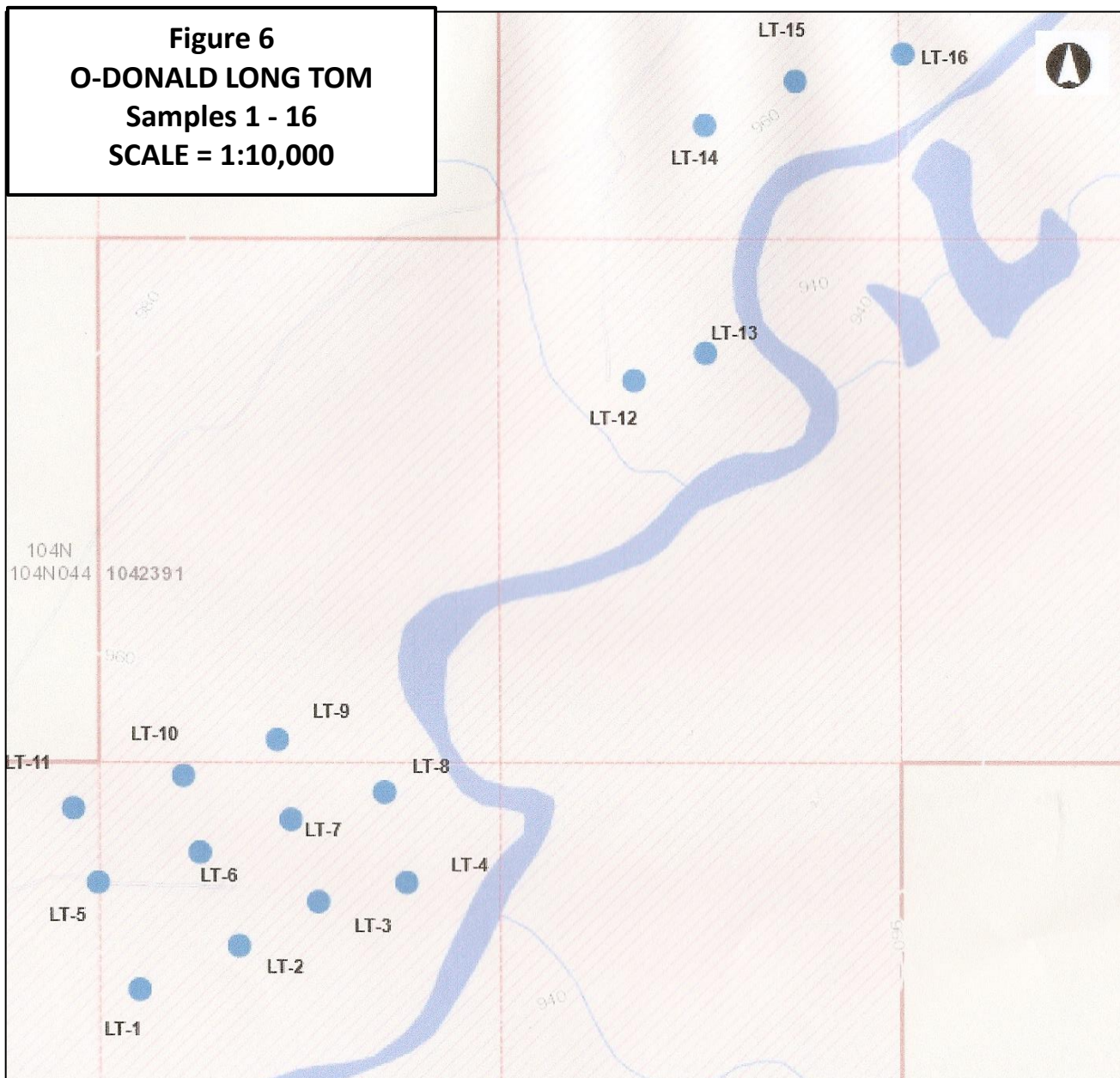


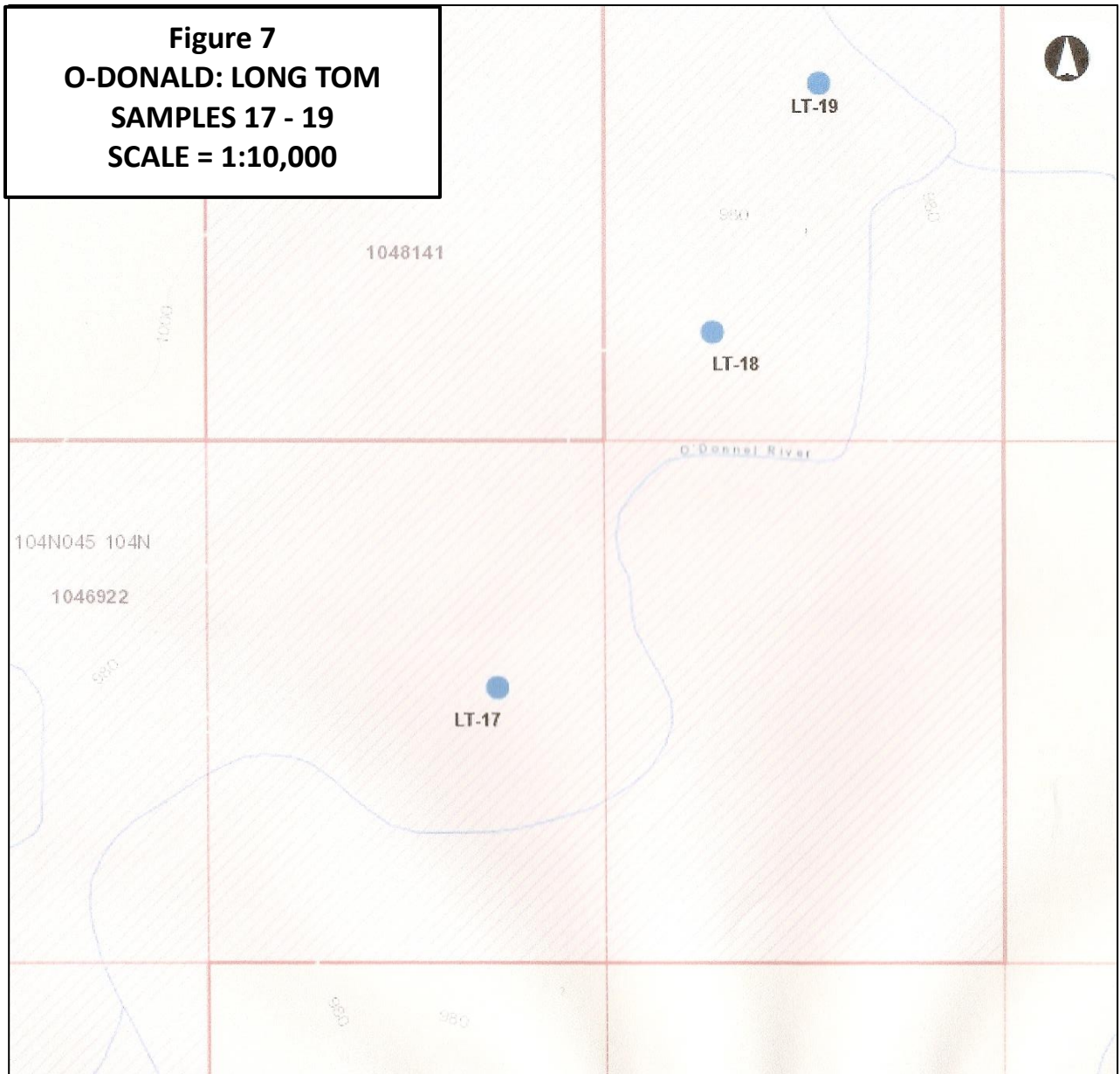
7.2 Bulk Samples processed through Long Tom

Long Tom Samples, LT-1 to LT-19

Sample Number	Location UTM Coordinates	Comments
LT-01	599645 / 6586588	1 m deep, sand silt, no gold
LT-02	599758 / 6586637	1 m deep, wet, gravel, fine flakes, fine gold
LT-03	599849 / 6586693	1 m deep, gravel, fine gold, bk. sand
LT-04	599897 / 6586718	1/2 meter, very wet/fine sand/silt, no gold
LT-05	599598 / 6586696	1 m deep, gravel, fine gold/bk. sand, quartz
LT-06	599692 / 6586727	1 m deep, gravel, flakes, fine gold, bk. sand

LT-07	599789 / 6586764	3/4 m deep. wet, poor sample, no gold
LT-08	599868 / 6586795	1 m deep, gravel/ lg. rock, fine gold/bk. sand
LT-09	599814 / 6586840	1 m deep, wet, silt/clay, no gold
LT-10	599690 /6586793	1 m deep, wet gravel, no gold, bk. sand
LT-11	599553 /6586753	1 m deep, gravel, lg. rocks, no gold, quartz
LT-12	600858 / 6587970	1 m deep, fine gold, bk. sand gravel
LT-13	600995 / 658042	1 m deep, silt/ clay poor sample, wet
LT-14	600077 / 6587382	1 m deep, fine gold, quarts/pyrite float
LT-15	600178 / 6587429	1/2 m deep, wet, poor sample clay/silt
LT-16	600289 / 6587463	1 m deep, wet, gravel/clay, poor sample
LT-17	602587 / 6589904	1 m deep, coarser gold. cleaned & weighed, \$12
LT-18	602778 / 6590225	1 m deep, fine gold/bk. sand in gravel
LT-19	602891 / 6590466	1/2 m deep, coarser gold, cleaned & weighed \$8





8 SUMMARY

The program was successful in a better understanding of the area but really emphasizes the need for the proposed drill program that was applied for on the permit. Bed rock was not achieved by hand dug holes as most of the sample locations were wet or hosted large boulders. A drill program would also return a more consistent sample and bed rock depth. Fine gold was recovered in most samples if the material was not from a wet hole, but not in economic quantities

9 RECOMMENDATIONS

A drill program, as well as a number of small test pits to correlate to the drill results would definitely provide a better picture as to mineable reserves. A geophysical survey to establish bed rock would also be an asset to exploration of the area.

10 EXPENSES

Work carried out by Don Dixon, Box 21234, Whitehorse, Y1A 6R2., and John Kemp, Box 98 Telkwa, B.C., V0J 2X0.

• Set camp, familiarize with area. 2 man-days @ \$350.00	\$ 700.00
• Place grid lines, 5km. 4 man- days @ \$350.00	\$ 1,400.00
• Prospect and sample creeks, 10 man-days @ \$350.00	\$ 3,500.00
• Bulk samples, 12 man-days @ \$350.00	\$ 4,200.00
• Follow up of work, pack camp, 2 man-days @ \$350.00	\$ 700.00
• Truck, 15 days @ \$100.00 per day	\$ 1,500.00
• Tools & Equipment, (pump, generator, 2 ATVs, fuel	\$ 1,000.00
• Camp, food, propane, etc, 16 days	\$ 1,600.00
• Mob & demob, Smithers to Atlin	\$ 1,000.00
• Report writing.....	\$ 700.00
• TOTAL _____	<u>\$16,300.00</u>

11 STATEMENT OF QUALIFICATIONS

I, John Kemp, of Box 98, Telkwa. B.C. have worked for the past 25 years as a full time prospector, including 20 years of providing contract services for various mineral exploration and small mine operations.

I am registered as a Free Miner under number 113908 and have completed several mineral related short courses, including:

- Basic Prospecting Course, 1970
- Advanced Prospecting Course, 1991
- Petrology for Prospectors, 1992
- Models and Alteration in Base and Precious Metals
- Numerous other short courses

12 REFERENCES

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