Geological-Geochemical Follow-up Investigations of a Skarn Gold Showing and Reported Higher than Background Airborne Uranium Radiometric Reading and uraniferous sampling on Upper Union Creek, Centered at 59˚ 36.416" North and 133˚ 14.211" West, Atlin Mining Division, British Columbia, Canada

By

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List of mineral claim tenures where work was done.

365769.365770,365771,365772,365783,365784,365785,365786,
365787,365788,365789,365790,365791,365792, 519075,519076

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Date of Field Work: 05th June- 28th June 2006

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Summary.

The upper drainages of Union Creek lies south of Surprise Lake, Atlin MD., BC. In 2006 this area was the focus of a 5 day follow-up investigation. The area covered approximately 16 sq. km.

During a previous prospecting visit in May 2005, traces of gold, ranging up to 3.8 gms/t were returned from two samples taken from a limestone skarn lens situate at the divide between Union Creek and Eagle Creek.

1969 assessment and internal company reports made by Canadian Johns-Manville Company Limited indicated traces uranium ranging up to 0.001% U308 in rock, and stream sediments up to 240 ppm U308 had been returned from the eastern drainages of upper Union Creek

Seigel Associates of Toronto had also completed an airborne radiometric survey in the area during the same year for that company, indicating higher than background uranium over several points on upper Union Creek.

During the 2006 follow-up, 42 rock, rock float, talus fines, soil samples and one stream sample were collected from the area but failed to duplicate or lead to a mineral source for gold, or extend, amplify nor confirm uranium in upper Union Creek.

Two grab rock samples taken from a hanging-wall of a dyke in limestone skarn, at the divide between upper Union Creek and upper Eagle Creek, returned 3.9 ppm Ag and 20 ppm Ag,

The claims on the west side of Union Creek should be retained pending further exploration of placer gold found in Upper Wright and Eagle Creeks.

The Union Creek claims on the eastern side of upper Union Creek are of no further commercial interest for uranium

Table of Contents

<u>Photograph on front cover:</u> Caribou on slopes above limestone lens, looking south from upper Union Creek. June 2006.

1.0 Introduction and Terms of Reference

In May 2006, Mr. John McFarland Jr, with offices at 8129 Occidental Avenue South, Seattle, Washington invited this writer to investigate his mineral claims on Upper Union Creeks, Atlin Mining Division, North West British Columbia, Canada, ref. Figure 1.

Mr. McFarland Jr currently has 39 mineral claims in the area totaling **2,095.56 hectares.**

Thirty-six of these claims are 25 hectare claim post claims, while 3 are mineral tenures staked on line.

Mr. McFarland Jr has two interests in the area; west of Union Creek the area is of interest for gold in a limestone lens and associated rusty zone; east of Union Creek the area is primarily of interest for uranium.

During June 2006, the writer from his base in the community of Atlin completed 5 field collecting 43 samples for geochemical analysis and performed geological mapping over a 16 sq.km target area.

1.1 Objectives of 2006 Field work.

Background information is as follows.

1) An original gold discovery site within a limestone lens at the divide between upper Union Creek and upper Eagle Creek was made Mr. McFarland in previous years. In 2005, with Mr. McFarland's guidance, the writer confirmed the site hosted non-visible gold after collecting two samples from out crop yielding 875 and 3.8 gms/t gold. In the writers opinion the outcrop represented a diorite dyke associated with a limestone skarn, Cache Creek sediments, rusty argillite hornfels, and a geological contact with quartz monzonite of the Surprise Lake Batholith.
2) Given the dramatic rise in the uranium market since 2002, the writer indicated to Mr. McFarland in 2005 that the quartz monzonite (alaskite) rocks on the east side of upper Union Creek had been of interest to Johns-Manville Company Ltd for uranium, during the late 1960's. Mr. McFarland then staked the area, using Mineral Titles Online, (MTO) facilities.

Specifically the objectives of the 2006 survey were;

- Further investigate the limestone lens, the diorite dyke and a rusty zone for gold potential, and
- Further investigate the possibility of uranium, primarily on the east side of upper side of Union Creek.

Table 1 gives details of samples collected from the limestone skarn by the writer in 2005. Locations were captured on a hand-held Garmin Trex Legend GPS.

Table 1. 2005 details of samples collected from limestone skarn, upper Union Creek, Atlin, MD. NAD 27 Alaska

Rock Sample #	Easting	Northing	Claim Owner	Au ppb	Ag ppm	Field Sample Ref
E47453	597996	6607841	John McFarland	875	1.3	CA05-2-2
E47458	597996	6607841	John McFarland	>1000 (3.8 gms/ton)	3.0	CA05-2-7

1.2 Background of Skarn Gold Deposits[1]

On examination of the gold bearing limestone outcrop on the west side of the claims in 2005, the writer determined the outcrop to be part of a gold skarn. According to Gerald E. Ray of the BCEMPR, characteristics for gold skarns can be expected to have some of the following attributes:

- gold is the dominant mineralization
- gold is generally associated with Ca-Fe- Mg silicates, such as clinopyroxene, garnet, epidote
- vast majority of gold skarns are hosted in calcareous rocks, (calcic subtype)
- gold is commonly present as micron-sized inclusions in sulphides…to the naked eye gold is indistinguishable from waste rock.
- gold is generally associated with bismuth tellurides
- can either be exoskarn, (within the intruded rock) or endoskarn, (within the intruding rock) type.

1.3 Background of Uranium Deposits in Alaskite (Quartz Monzonites) Rocks

Known uranium ore bodies within alaskite rocks are those in Namibia, West Africa. The Rössing uranium deposit is the best example. The following excerpts are taken directly from the Rössing Mine website.[2]

“The Rössing uranium deposit is situated some 65 Kilometres east of the coastal town of Swakopmund. Captain Peter Louw, a mineral prospector working in the Namib Desert, discovered it in the late 1920s. It is a region of vast gravel plains and rocky outcrops.”

“Although various attempts were made by Captain Louw and his partners to interest mining companies in the deposit, it was only in the mid 1960s that a subsidiary of the RTZ Corporation (now Rio Tinto plc) took an option on the prospect and began a long program of geophysical and geological surveys, drilling and evaluation.”

[1] Ray, (1997). Au Skarns. B.C Ministry of Energy, Mines and Petroleum Resources

[2] www. Rossing.com

“The ore body was found to be an enormous low-grade deposit of uranium embedded in tough, abrasive granite known as alaskite. In 1973 it was decided to go ahead with the mining of the ore body. The plant and mine were designed to produce 4 500 tonnes of uranium oxide per year and began operating in March 1976, reaching full scale production in 1979.”

“Today the Rössing mine is the fifth largest producer of uranium in the world and accounts for 8% of total world production. Rio Tinto currently holds 68.4% of Rössing's equity.”

2.0 Disclaimer

This report is based on examination of the property by the writer in 2006, information supplied by government geological reports and available Canadian Johns-Manville Company Limited (CJM) assessment and internal reports. The latter reports, for NW-British Columbia, were purchased by the writer when CJM pulled out of Canada during the 1970s.

CJM was very active in the Atlin area during the 1960s-1970s, including the Union Creek area.

This assessment expresses opinions and recommendations regarding future exploration on upper Union Creek area, are based on the writers mineral exploration in the field, spanning more than 50 seasons. These opinions and recommendations are for guidance only, and in no way are meant to be conclusive.

For information regarding the ownership of Union Creek properties, the writer depended on the tenure Excel lists provided under John McFarland’s name on **Mineral Titles on Line,** at the time of writing this report, as well as maps and Excel lists provided by John McFarland. To the best of the writer’s opinion, these tenures are correct, but the writer disclaims any responsibility for such information and any changes after this report is put on open file.

All soil and rock samples collected from the property were collected by the writer and kept under lock-and-key until mailed through the Canadian Post system directly to Eco-Tech Laboratories at 10041 Dallas Drive, Kamloops, British Columbia. The writer has not visited this laboratory, but met the chief assayer and several assistants of this laboratory, as well as reviewing the Laboratories web site, and is satisfied with the analytical procedures carried out in an appropriate secure and scientific manner.

The writer is satisfied that all work pertaining to this survey was carried out in a professional manner and in accordance with National Instrument 43-101, and is not aware of any material facts or omissions that could be misleading.

3.0 Property Description ands Location

The upper Union Creek mineral claims are located in NW British Columbia, within the Atlin Mining District, Figure 1. These claims are located 22. 9 km east of the community of Atlin and 5.8 km south of Surprise Lake, Figure 2. Coordinates are:

59˚ 36.416’ North 133˚ 14.211’ W

A complete list of Mr. John Malcolm Jr. McFarland's Union Creek mineral claims are tabulated in appendices 3.

4.0 Accessibility, Climate, Local Resources, Infrastructure and Physiography

Access to the mineral claims on the west side of Union Creek can be gained by gravel road and 4 by 4 mining trails.

A 17 km gravel road leads from Atlin to Surprise Lake. Just before Surprise Lake a right hand turn up the Otter Creek mining road leads to the Wright Creek trail which then bears east at Eagle Creek, a total distance from Surprise Lake turn-off being 7.2 km.

At the headwaters of Eagle Creek, the mining road quickly becomes a trail, which leads towards Casino Creek and then easterly towards the skarn gold showings. In this respect there is a lower trail and an upper trail. In 2006 the lower trail was washed out, causing the writer to loose two field days until he discovered the upper trail route

Three paternoster lakes at the headwaters of Union creek are too shallow for float plane use.

During the spring floods of 2006, the writer opted to gain access to the west and east side of Union Creek by helicopter from Atlin, during the first two days of the survey.

The climate of the Atlin area has witnessed some changes over the past ten years.

Snows usually have been coming late, arriving to stay in December and last until April. Atlin Lake freezes over for shorter periods than previously, staring from early January and breaks up in early May. The lake has open areas in some locations, and ice can be thin where major creeks flow in to the lake, such as in Pine Creek Bay.

Spring weather is fine, and is by far the best weather during the year, with temperatures warm and sky visibility unlimited.

In 2004, summers however were dry, and forest fires were widespread. During the summer of 2005 and 2006, forest fires were much less dangerous. However, good weather in the summer can be expected on some days, but not all days. Early fall is generally windy, but makes up for it given the spectacular foliage colours, especially in the high alpine.

Union Creek is a wide U-shaped valley, which has an elevation of 1200 metres within its upper reaches. Union Creek drains northwards to Surprise Lake. The valley is surrounded on both sides by mountains which attain elevations in excess of 1700 metres

Scattered groups of conifers cover part of the valley floor and lower slopes. Buck-brush is quite thick on the lower slopes of Union creek, and valley floor. Some swamps are localized along the central axis of the valley floor north and south of the paternoster lakes. Areas higher than 1300 metres consist of alpine grasses, and variable wild flowers. Large areas on the higher mountain slopes and summits are virtually devoid of vegetation

Terrain above Union Creek at 1400 metres and surrounding area is covered by a glacial carpet of glacial debris, morainal debris, rock fields, and locally rocky talus slopes where terrain meets steeper slopes to mountain sides.

5.0 History of Atlin Mining, Exploration and Government Surveys

5.1 Atlin Placer Mining

Atlin became known as a productive Canadian placer gold camp in the year 1898, after the discoveries of Miller and Mclaren, who first found placer gold in paying quantities[3]. This placer gold was found initially on Pine Creek and later by gold seekers on adjacent creeks; Spruce, Otter, Ruby, Boulder and Birch and other Atlin creeks.

Production of placer gold, as determined by Holland[4] from 1898 to 1946 is tabulated in Table 2.

Table 2. Gold Production from Atlin Creeks. 1898-1946

Ounces of Gold Produced 1898-1946	Creek Name
262,603	Spruce Creek
138,144	Pine Creek
67,811	Boulder Creek
55,272	Ruby Creek
46,953	McKee Creek
20,113	Otter Creek
14,729	Wright Creek
12,898	Birch Creek
15,624	All others, (21 Creeks)
634,147	Total

Spruce Creek flows northwest into Pine Creek about 4 kilometers east of Atlin. The main creek is about 23 kilometers long with two main 4 kilometer long branches at its head. The creek was worked for a length of about 5 kilometers primarily in an area around the midpoint of its course. Some work has been done in the upper reaches of the creek, but the operations have been small and less successful.

Some hydraulic mining and steam shovel operations were done on the main part of Spruce Creek but by far the majority of gold was recovered by significant underground development in the early 1900's. From 1898 to 1946, approximately 262,603 ounces of gold were re-

[3] Geological Survey Branch, Paper No. 26, 1910.
[4] Holland,1950.

covered from Spruce Creek making it the largest gold producer in Atlin. Records showing the exact amount of underground work are not available.

Pine Creek flows west from Surprise Lake into Atlin Lake about three kilometers south of the present town-site of Atlin. The creek is about 20 kilometers long and was the site of the initial discovery of gold in Atlin in 1898. The creek has been mined more or less continuously from that time to the present with both individual and very large scale, mechanical mining operations by large companies. Hydraulic mining was successful on this creek and relatively little underground work was done.

The creek is underlain by a belt of variably altered ultramafic rocks that stretches from Surprise Lake to the town of Atlin. The rocks belong to the lower sections of the Upper Paleozoic Cache Creek Group. In the Pine Creek placer operation areas, the ultramafics are highly talc and serpentine altered.

The placer deposit is about 2 kilometers long and up to 350 meters wide. Like other areas in Atlin the pay gravels are located right above bedrock. Mining ceased at the eastern ends toward Surprise Lake because bedrock became progressively deeper and pits were too deep requiring removal of too much overburden with insufficient room for all the tailings.

Approximately 138,144 ounces of gold were removed from Pine Creek from 1898 to 1946, the second largest producer in the Atlin gold fields behind Spruce Creek. However, increased work more recently on Pine Creek allowed it to become the largest producer in the Atlin area from 1956 onward.

Boulder Creek flows south into the west end of Surprise Lake about 17 kilometers northeast of Atlin. The stream is about 6 kilometers long and braids into 3 separate streams near its mouth where most of the placer work has been done. From the years 1898 to 1946, 67,811 ounces of gold were taken from the creek. The creek was extensively hydraulically mined at the lower end and received a resurgence of work in the 1980's. It is the third largest producer in Atlin.

Ruby Creek flows south into the west end of Surprise Lake about 22 kilometers northeast of Atlin. The creek is about 10 kilometers long and braids into several streams at its mouth. Most of the gold was removed from the creek between 1898 and 1948 with both hydraulic and underground operations. Drifting was done on bedrock accessed by one main decline. All of the hydraulic work occurred at the lower end of the creek. Between the years 1906 and 1946, a total of 55,272 ounces of gold were recovered, the fourth highest producer in Atlin (Bulletin 26).

McKee Creek flows west and southwest into Atlin Lake about 14 kilometers south of Atlin. The creek is about 12 kilometers long and has been worked primarily in the middle third section of its length. Hydraulic mining was started in 1903 and accounted for most of the gold recovered from McKee. Some underground work was also done on the creek in the mid 1930's. Between 1898-1946 this creek produced 46,953 ounces of gold

Otter Creek flows north into the west end of Surprise Lake about 17 kilometers northeast of Atlin. The main part of the creek is about 10 kilometers long with a 5 kilometer long west flowing spur at its southern end. The creek has been worked more or less continuously from the discovery of gold in Pine Creek in 1898. Approximately 20,113 ounces of gold were recovered from the creek between 1898 and 1946 making it the sixth largest producer in the Atlin area. Most was taken by hydraulic and underground operations near the mouth of the creek.

The lower section of Otter Creek flows over mafic volcanics of the Mississippian to Pennsylvanian Nakina Formation, Cache Creek Group, and ultramafic rocks of the Pennsylvanian to Permian Atlin Intrusions. The ultramafic rocks are often highly altered to talc and serpentinite with silicification and iron-carbonate alteration. These rocks are overlain by primarily chert and argillite of the Kedahda Formation, also of the Cache Creek Group, which are exposed further up the stream. The creek is located right at the southern margin of the Late Cretaceous Surprise Lake Batholith.

Three pay channels were mined at Otter Creek, one on bedrock, one 10 meters above, and one 20 meters above. Like many creeks in Atlin, the richest pay came from the first 1.8 to 2.4 metres of gravel above bedrock and from a metre or so of the often highly altered and weathered bedrock itself.

Work on Otter Creek concentrated in the lower section near Surprise Lake and in the west flowing upper branch. Only exploratory drilling has been done in the middle sections. The creek received little or no work in the late 1940's and 1950's. Some underground work has been done on the creek.

Birch Creek flows south into Pine Creek less than 2 kilometers west of Surprise Lake and about 15 kilometers northeast of Atlin. The creek is about 9 kilometers long and was worked for about a 3.5 to 4 kilometer length starting from about 1 kilometer above its junction with Pine Creek. Hydraulic methods were used a great deal on Birch Creek and 12,898 ounces of gold were recovered on the creek from 1898-1946. It was known for its unusually coarse gold. It is the 8th largest producer of placer gold in the Atlin camp.

Wright Creek and Eagle Creek are singled out and mentioned last because they are both of importance to this study.

Wright Creek flows north into the west end of Surprise Lake about 22 kilometers northeast of Atlin. The creek is about 8 kilometers long with its upper reaches flowing west for about 2.5 kilometers. The creek produced approximately 14,729 ounces of gold between 1898 and 1946 and was known for producing the coarsest gold in Atlin. It was the seventh largest producer of gold.

Eagle Creek flows into Wright Creek, and although data on production is not available, it has been worked for many years, and is a producing creek up to the present.

Wright Creek placer gold is reported[5] as being similar to other gold from Atlin creeks, i.e. rounded and flattened, with no visible quartz associations. However, on upper Eagle Creek placer gold is reported as coarse and angular, and in association with abundant quartz. The quartz is reported as milky white, but also reported as Fe-oxide coated in part.

The significance of the latter is that it suggests an original quartz host, and has not traveled as far as that in Wright Creek.

On all the above creeks in the Atlin region, as well as others not mentioned here, mining operations grew in scale due to heavy equipment availability and total gold production from the Atlin camp since 1898 could now easily be in the 3 million ounces range, (writer's opinion).

The attached placer claim online-print-out attests to the fact that Atlin in present times is still a placer mining destination, Figure 3.

5.2 Atlin Hard Rock Mining and Exploration, 1898 to the present

During 1899, hard rock mineral claims were also staked in the Atlin region. These included claims with[6]:

1. Gold-tellurium quartz veins
2. Gold-silver quartz veins
3. Cupriferous silver-gold veins
4. Silver-lead veins
5. Antimony veins

During the first part of the 20th century one of the main target areas was the gold-tellurium quartz veins on the east side of the Taku Arm, located 32 km west of Atlin, and known as the Engineer Mine.

Other hard rock mineral properties closer to Atlin, are summarized below.

The Beavis property'[7] is located on the eastern shore of Atlin Lake about 2 kilometers north of the town of Atlin.

The occurrence consists of a well-defined quartz vein hosted within rocks of the Pennsylvanian to Permian Atlin Ultramafic Allochthon. In the area of the vein, the ultramafic rock can be both silicified and carbonate altered to a listwanite-type alteration assemblage with some chromium micas identified as fuchsite or mariposite.

The host rocks for the intrusions are cherts and argillites of the Upper Mississippian to Upper Pennsylvanian Kedahda Formation of the Mississippian to Triassic Cache Creek

[5] Gruenwald, W. 1984
[6] Ibid.,
[7] Minfiles

Group (Complex). The quartz veins and alteration in the “mine” occur very near the contact of the intrusions and the sediments.

The main vein at the Beavis “mine” is 45 centimeters wide and it strikes at 155 degrees with a dip of 85 degrees to the northeast. Associated with the vein is a light coloured felsic dyke. The exact relationship of the vein and dyke is not documented, although a similar dyke/vein assemblage occurs on the Anaconda property (104N 046) about 3 kilometers to the south. The dyke on both properties is mineralized with disseminated pyrite. The quartz veins of the Beavis “mine” carry variable amounts of disseminated pyrite and visible gold. Some breccia textures are present.

Work on the “mine” occurred from 1902 to 1908 with the most work done in 1908 by the Gold Group Mining Company with three levels developed from a shaft sunk to 60 meters. A sample taken by Tom Schroeter (Energy, Mines and Petroleum Resources) on July 13, 1985 from a silicified breccia zone contained 63 grams per tonne gold and 235 grams per tonne silver.

The Anaconda property is located on the east shore of Atlin Lake about 1 kilometer south of the town of Atlin. Work on the quartz veins started in 1898 or 1899 and a 30 meter adit were driven from a level 5 meters above the lake. The claim was crown-granted in 1900 but work was suspended in that year. Homestake re-opened the property for work in 1987.

The showing consists of a narrow quartz vein less than 25 centimeters wide hosted in variable altered ultramafic peridotites of the Atlin Ultramafic Allochthon. Serpentine alteration is common. An ultramafic ophiolite "slice" occurs within the Lower Mississippian to Middle Pennsylvanian Nakina Formation of the Mississippian to Triassic Cache Creek Group (Complex?).

Oxidized seams and cavities are reported to have had the highest gold values, although assays are available from only one sample which reported "a small amount of gold and 0.75 ounces to the tonne silver (26 grams per tonne)".

The Imperial[8] “mine” property is located on the southwest flank of Monroe Mountain, southwest of Surprise Lake. The property is about 8 kilometers northeast of Atlin. The “mine” was developed from 1900 to 1902. The Imperial occurrence lies within a body of ultramafic rocks of the Pennsylvanian to Permian Atlin Ultramfic Allochton. These rocks are composed largely of peridotites, diorites, and gabbros under variable degrees of shearing and alteration. The peridotites are often highly serpentinized, especially in the vicinity of local faults. These rocks have intruded into a volcanic package of the Lower Mississippian to Middle Pennsylvanian Nakina Formation of the Mississippian to Triassic Cache Creek Group (Complex?). This package is composed largely of greenstone and volcanic greywacke.

[8] Minfiles

Porphyritic felsic dykes are often associated with the veins and Minfile reports they can carry a significant amount of gold, (but not confirmed by this writer, who since 2000 has doing continuing and independent research around this “mine”).

The alteration around the “mine” is silica-carbonate (listwanite?) type magnesite/ ankerite, quartz, calcite, talc, fuchsite and minor tremolite within serpentinite and quartz, calcite, ankerite and fuchsite within greenstone (Assessment Report 9868). Electrum has been noted associated with quartz veining within carbonatized andesite basalts.[9]

The Imperial occurrence comprises several parallel quartz-filled fissures. According to Minfiles, the main vein or lode varies from 0.3 to 2.1 meters in width and has been traced for a distance of over 150 meters. The vein strikes at 135 degrees with a dip of 55 degrees to the south- west. The vein attitude is very consistent. Mineralization in the vein comprises is reported as visible gold with variable amounts of chalcopyrite, galena and pyrite. Copper staining with malachite is common. The latter is generally true, with the exception of visible gold; according to this writer gold is present as electrum, and as a rule not visible to the naked eye.

According to Minfiles the “mine” was operated from two levels with over 150 meters of underground development. The western extension of the vein is faulted and it pinches to an un-mineable width to the east. On the upper level, the mining width can reach 2.5 meters, but the vein pinches with depth as well as decreasing in grade. A total of 245 tonnes milled from the upper level yielded 13.7 grams per tonne gold while 23 tonnes milled from the lower level yielded only 5.1 grams per tonne gold.

More recent history of mineral exploration and gold mining on the Imperial Claim was carried out in 1988 by Homestake Mineral Development Ltd, and details are covered in that company’s 1988 assessment report.[10]

Nearby the Imperial “mine” occurrence is the Yellow Jacket hard rock gold occurrence on Pine Creek. This occurrence has been known since 1899, and is the focus of present exploration by Prize Mining Corp.

Yellow Jacket is located west of Surprise Lake along Pine Creek which runs southwest before draining into Atlin. The occurrence is located directly under a well-developed placer area with a long history of production dating back to the late 1800's. A 26 meter shaft was sunk on the property in 1903 and reported to hit free gold but the shaft was filled with placer tailings and has not been located since. Reportedly, hard rock gold was hosted in quartz-filled fissures at mineable widths.

From past drilling operations, the occurrence is now known to consist of a zone of quartz veins, breccia and silicified patches located within intensely altered and sheared ultramafic rocks of the Pennsylvanian to Permian Atlin Ultramafic Allochthon. The ultramafics are

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[9] Aspinall, Assessment Report, Imperial claim, 2004.
[10] A/R 17,495.

bounded above by light green, hornblende-feldspar porphyritic andesite and below by a darker green and more massive andesite to basalt of the Permian Cache Creek Group.

The contacts are highly sheared and altered, often having slickensides. Around the contacts, the basalt is heavily chlorite-altered and the ultramafic is altered to serpentine, fuchsite, talc, quartz and carbonate (listwanite assemblage).

The talc/serpentine zones often grade into intense silicification. Within the ultramafic zone, there are abundant interbedded sequences of andesite/basalt. Shearing and alteration has occurred preferentially along the contacts of the interbedded mafic and ultramafic rocks.

The auriferous zone occurs near the top of the ultramafic zone which may define a fault zone. The zone is 3 to 4 meters wide with narrow quartz veins containing free gold within breccia and silicified zones. Pyrite, chromite, and fuchsite occur as minor accessories. Samples from this zone have run 15.1 grams per tonne gold over 4.0 meters and 17.8 grams per tonne gold over 3.1 meters[11]. Minor magnesite is found in the auriferous zones.

Drill programs conducted initially by Canova Resources and Tri-Pacific Resources in 1983[12], and subsequently by Homestake Mining Company in 1986 and 1987 have defined the mineralized zone over a 226 meter strike length with ore grade intercepts to 91 meters in depth. The favourable structure has been drill indicated over 2 kilometers and to a depth of 183 meters (George Cross Newsletter, No. 213, 1988)[13].

A 43-101 technical report by Linda Dandy details the history and 2004-2005 status of this and less known occurrences on Pine Creek.[14]

Another hard rock showing is the one known as Pictou. This showing[15] is located on the west side of Pine Creek, about one kilometer east of the present-day airstrip and 2 to 3 kilometers northeast of Atlin.

The occurrence consists of an extensive alteration zone hosted within ultramafic rocks of the Permian Atlin Ultramafic Allochthon. The rocks in the vicinity of the showings are highly altered but outcrops one kilometer to the west reveal their composition to be that of a knobby (pyroxene) peridotite. The ultramafic "slice" occurs within volcanic rocks of the Permian Cache Creek Group (Complex?). There are no lithologic contacts or changes on the property.

The occurrence is a wide alteration/fracture zone that has pervasive silicification, brecciation, and iron and magnesium-carbonate (listwanite?) alteration. The zone can be up to 5 meters

[11] Vancouver Stockwatch, March 11, 1987
[12] Linda Dandy, Atlin Report, 2005
[13] Minfiles
[14] Linda Dandy, Atlin Report, 2005
[15] Minfiles

wide but its thickness is inconsistent. Some bull quartz and narrow radiating quartz veinlets are present although distinct quartz veins are not abundant in the alteration zone.

Breccia textures are common and the zone is vertical, striking about 100 degrees azimuth. Pyrite is minor with trace amounts of tetrahedrite, chalcopyrite, and fuchsite. Zoning of iron and magnesium in the carbonate alteration is common. Magnesite is present. Quartz veins are vuggy; open space textures in the zone are common. Recent sampling suggests that the breccia zones are anomalous in gold and the quartz veins also anomalous in gold, silver, arsenic, and antimony. Gold assays are reported as high as 0.4 ounces per tonne.

Work on the property began in 1900 by Lord Hamilton of London who put in a 20 meter adit and 7 meter shaft. Some 68 years later, T.O. “Tom” Connolly of Atlin developed more surface workings and shipped a .91 tonne bulk sample (to Trail?) which is reported to have contained 342 grams of silver, 0.3 per cent lead and 0.15 per cent zinc (Minister of Mines Annual Report 1968, page A52). In 1987, Homestake Mining did geophysical and geochemical work with some surface trenching.

Other historical hard rock gold (and silver) occurrences are the Lakeview and White star, discovered between 1898-1904. These occurrences are located between Birch and Boulder creeks which both drain into the west end of Surprise Lake., and 16 kilometers northeast of Atlin. Some underground work was done on the occurrence in 1904. Minfiles reports grab? Samples returning 4.11 Au g/t and 308.6 Ag g/t

In 2004 the Lakeview and White Star occurrences were staked by this writer who carried-out surface assessment work in 2004[16] and 2005.[17] The 2004 work returned rock samples from tailings as high as 880 ppb Au with adit locality samples returning values up to 680 ppb Au; soils collected range between 20 ppb Au to 355 ppb Au.

An important silver-lead deposit is the Atlin Ruffner Mine[18]. The Atlin Ruffner mine is located on Crater Creek which drains west into the Fourth of July Creek. The mine is about 23 kilometers northeast of Atlin. The occurrence has been an intermittent producer from 1916 to 1981, being operated by numerous companies.

Mineralization averages 0.42 grams per tonne gold, 267 grams per tonne silver and 5 per cent combined lead-zinc. Unclassified reserves from the 2 zones from which underground development and production have taken place are 113,638 tonnes grading 600 grams per tonne silver and 5.0 per cent lead.

The Adanac molybdenum porphyry deposit near Atlin, in northwestern British Columbia, was discovered in 1905. It was explored extensively between 1967 and 1980 by Kerr Addison and Placer Dome under option agreements between mineral title holders Adanac Mining and Exploration Ltd, and Canadian Johns-Manville Co. Ltd. The deposit is within a

[16] Aspinall, Lakeview Assessment Report 2005
[17] Aspinall, report pending
[18]Assessment Report 18646

complex multiphase quartz monzonite stock that is a satellite of the post-accretionary, Surprise Lake Batholith. The property was allowed to lapse and Adanac Moly Corp staked the property in 2001. In 2004 Adanac commenced check drilling, and intends to put the deposit into production in 2007-2008.

In 2004, mining consultants AMEC estimated the Ruby Creek molybdenum deposit contains a Measured and Indicated Resource of 199.3 million tonnes grading 0.062 per cent molybdenum, with an additional Inferred Resource of 20.7 million tonnes grading 0.057 per cent molybdenum above a cut-off grade of 0.04 per cent molybdenum. Results and evaluation of a 2006 drilling program is pending.

5.3 Explorations by the McFarland's, on Wright Creek and Eagle Creek, and west of Union Creek, 1984.

Mr. John McFarland junior, together with his father have had mining interests in the Atlin for many years. In 1984 mineral claims held by the McFarland's on upper Wright Creek were optioned to Hawthorne Gold Corporation, formally of 837 East Cordova Street, Vancouver, B.C.

Hawthorne carried out geological, geochemical and geophysical[19] on the Eagle, Margarita and Butterfly claims in 1984, two groups of non-contiguous claims extending from upper Wright Creek to upper Eagle Creek, located west of upper Union Creek. Although these claims were allowed to lapse, Mr. John McFarland remained interested in the area, and located the limestone gold skarn showing at the headwaters of a west fork on upper Union Creek.

5.4 Canadian Johns-Manville Company Limited on Union Creek, 1969.

Canadian Johns-Manville Company Limited, (CJM) was primarily an asbestos company, and owner of a large asbestos mine in Quebec. CJM had been interested NW-British Columbia since the Cassiar asbestos deposit was discovered, and in the 1960's had staked the ACE Claim group for asbestos in the Menatatuline Range, in the region of Victoria Lake, 100 km SE. of the community of Atlin.

In June 1966 CJM appointed the writer as project manager for the region. During routine geological reconnaissance work between 1967-1968, the CJM Exploration Manager Mr. H.K Conn, the writer and his team, (Dr. David Evans, Dr. Fabian Forgeron, and summer geology-engineer students Dennis Forgeron, Peter Nicholson) noted Atlin was also important for showings of tungsten, tin, molybdenum and even traces of uranium, besides its significance for placer gold and lode silver-lead, (Atlin Ruffner).

In 1968, CJM geological reconnaissance team-work located anomalous stream samples for uranium, collected immediately north of the paternoster lakes near the headwaters of Union Creek, Ref. Plate 1c. Subsequent CJM geological-geochemical surveys were carried out, indicating further erratic stream anomalies and soil/talus fines anomalies.

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[19] Gruenwald, W., 1984

Ground scintillometer and airborne radiometric surveys were subsequently carried out. One zone, called the F/N zone, (after discoverers Dennis **F**orgeron and Peter **N**icholson) proved higher than twice background, with readings between 50-80 UR/hr.

The airborne scintillometer survey was conducted by Seigel Associates Ltd, who verified the F/N zone to be weakly, anomalous in uranium, Ref: Plate 1b. Four uranium peaks were detected by the airborne survey, three of which were concentrated within the F/N zone, near the Cretaceous Surprise Lake Alaskite Batholith, and the Permian Cache Creek Group contact. Subsequent rock sampling indicated traces to 0.001% U308 returns, ref: Plate 1b, Rock samples 6675, 6676, and 6677.

The 1969 airborne anomalous readings indicated 25, 35, and 45 cps on the uranium channel, and 250, 600 and 650 on the broad band channel. over the F/N zone. A fourth airborne anomalous scintillometer reading on the west side of Union Creek, above the limestone gold skarn gave 40 cps on the uranium channel, and 550 cps on the broad band channel.[20]

CJM allowed the Union Creek property to lapse in 1970 as it became more involved in molybdenum exploration.

5.5 Government Geological Surveys

According to the records[21], J.C. Gwilliam was one of the first government geologists to report on the Atlin district in the years 1899-1900. At that that time Atlin was regarded as primarily a placer mining camp and hard rock gold mining data from the Imperial claim at Monroe Mountain north of Pine Creek and other hard rock properties were not included in Gwilliams investigations. At the same time, a BC government geologist included a report on the Atlin district for the BC Department of mines.[22]

1n 1910 D.D Cairnes[23] carried out work in portions of the Atlin district with the objective to gain an estimate of the hard rock deposits in the district, primarily coal and various other mineral prospects. In addition, Cairnes carried out a geological and topographical survey around Taku Arm, and the upper end of Atlin Lake and parts of the Southwestern region.

Geological mapping of the Atlin area began in earnest in 1951 to 1955 by J.D Aitkin under the auspices of the Geological Survey of Canada.[24] From 1966-1968 J.W.D Monger, also of the Geological Survey, selectively mapped the Atlin area and published his findings in GSC paper 74-47. Other Geological Survey geologists who later investigated the Atlin area were Bruce Ballantyne and Mackinnon.[25]

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[20] Klein, Jan. 1969
[21] Summary Report of the Geological Survey, 1910.
[22] Robertson, W.F. 1898, BC Dep.Mines.
[23] Ibid.
[24] Memoir 307, Atlin Map Area, British Columbia
[25] Geological Assoc. Canada, 1986.

As already mentioned during 1950, Holland [26] reported that placer gold production from Atlin creeks from 1998 to 1946 was 634,147 ounces. These creeks are itemized in Table 2, above.

In the late 1980's geologists of the BC Geological branch commenced annual studies in the Atlin area, and these geologists include Mary Anne Bloodgood and others, C.H Ash and others, Patrick J. Sack, as well as M.G Mihalynuk and others. The Branch's studies are on going to the present time.

7.0 2006 Exploration Survey on Upper Union Creek

The 2006 field season in NW. British Columbia was put back by approximately two weeks due to a late spring. Access by road to the property proved troublesome due to high creek levels at road crossing points, in particular Otter Creek. Spring thaws had also caused road embankment slumping, blocking off access trails between Eagle Creek and Union Creek. Access was therefore made initially by helicopter from Atlin until the work area was accessible by 4 wheel-drive jeep.

The area surveyed during 2006 consists of approximately 16 sq. km at the headwaters of Union Creek, straddling three small paternoster type lakes and adjacent valley sides, Ref: Plate 1a. Mineral claims surveyed are listed in table below:

Table 3: 2006 mineral claims surveyed.

Tenure-Two post Claims-25 ha. claims.	Tenure-Online-Mineral Title Claims, western part only
365769	519075
365770	519076
365771	
365772	
365783	
365784	
365785	
365786	
365787	
365788	
365789	
365790	
365791	
365792	

[26] Holland, S.S., 1950.

7.1. Sample Collection Method and Approach.

A total of 43 talus, soil, stream silt creek, rock float and rock (in-situ) samples were collected from the west and east side of Union Creek. Sample locations and numbers are shown on Figure 3. Details are listed on Plate 1a and in appendices 3, Table 8. Sample numbers are clarified as follows:

West side of Union Creek, (Eagle Creek)

ECRCA11-Sample Number, where EC= Eagle creek, R=in-situ rock, (F=Rock float, T=talus fines, S= soil); CA= initials of the collector, Clive ASPINALL. Sampler number.

East Side of Union Creek

UCTCA22-Sample Number, Where UC=Union Creek, T= talus fines, S=soil: Note Sample UCSCA028 is a stream sediment. CA= initials of the collector, Clive ASPINALL. Sample Number.

In addition, 9 outcrop samples were collected from the hanging wall of an approximate 1 metre thick diorite dyke intruding skarn crystalline limestone (7c). This dyke is exposed for approximately 18 metres, but only the hanging wall is exposed. The nines rock samples were collected at approximately 2 metre intervals. The footwall is covered by talus rubble. It strikes westerly and dips approximately 45 degrees to the north. Two other rock samples were collected from a second and proximal dyke to the south; and one rock sample was collected from the limestone skarn-quartz monzonite contact zone.

These 12 samples were designated **E-88413 to E- 88424** and all were collected from Location 9, Ref: Plate 1a.

7.2 Sample Preparation, Analysis and Security

Forty-three samples of rock, soil/talus fines and stream samples were collected and sent to Eco-Tech Laboratory 10041 Dallas Drive, Kamloops, BC V2C 6T4. Laboratory methods, as reported by Eco-Tech, are as follows.

GEOCHEMICAL GOLD ANALYSIS

Samples are catalogued and dried. Soils are prepared by sieving through an 80 mesh screen to obtain a minus 80 mesh fraction. Samples unable to produce adequate minus 80 mesh material are screened at a coarser fraction. These samples are flagged with the relevant mesh. Rock samples are 2 stages crushed to minus 10 mesh and a 250 gram sub-sample is pulverized on a ring mill pulverizer to -140 mesh. The sub-sample is rolled, homogenized and bagged in a pre-numbered bag.

The sample is weighed to 30 grams and fused along with proper fluxing materials. The bead is digested in aqua regia and analyzed on an atomic absorption instrument. Over-range values for rocks are re-analyzed using gold assay methods.

Appropriate reference materials accompany the samples through the process allowing for quality control assessment. Results are entered and printed along with quality control data (repeats and standards). The data is faxed and/or mailed to the client.

MULTI- ELEMENT ICP ANALYSIS, (ICP)

A 0.5 gram sample is digested with 3ml of a 3:1:2 (HCl: HN03:H20) which contains beryllium which acts as an internal standard for 90 minutes in a water bath at 95°C. The sample is then diluted to 10ml with water. The sample is analyzed on a Jarrell Ash ICP unit.

Results are collated by computer and are printed along with accompanying quality control data (repeats and standards). Results are printed on a laser printer and are faxed and/or mailed to the client.

	Detection Limit			Detection Limit	
	Low	Upper		Low	Upper
Ag	0.2ppm	30.0ppm	Fe	0.01%	10.00%
Al	0.01%	10.0%	La	10ppm	10,000ppm
As	5ppm	10,000ppm	Mg	0.01%	10.00%
Ba	5ppm	10,000ppm	Mn	1ppm	10,000ppm
Bi	5ppm	10,000ppm	Mo	1ppm	10,000ppm
Ca	0.01%	10.00%	Na	0.01%	10.00%
Cd	1ppm	10,000ppm	Ni	1ppm	10,000ppm
Co	1ppm	10,000ppm	P	10ppm	10,000ppm
Cr	1ppm	10,000ppm	Pb	2ppm	10,000ppm
Cu	1ppm	10,000ppm	Sb	5ppm	10,000ppm
Sn	20ppm	10,000ppm			
Sr	1ppm	10,000ppm			
Ti	0.01%	10.00%			
U	10ppm	10,000ppm			
V	1ppm	10,000ppm			
Y	1ppm	10,000ppm			
Zn	1ppm	10,000ppm			

SECURITY.

All samples were collected from the field and stored inside the writer’s office in Atlin under lock and key, before being shipped by Canada Post to the laboratory. The writer has not visited the laboratory in Kamloops, but has met the chief assayer, has been using that laboratory for the past five years and is satisfied with the analytical controls on sample analysis. It this point in time the writer has no reason to question the laboratory’s security measures.

7.3 Other Relevant Data and Information

Bedsides basic geological mapping, collecting rock, rock float, soil/talus fines and streams sediments from 28 locations within 16 sq.km survey area, radiometric readings using an Exploranium portable gamma ray spectrometer was employed to collect total counts per second (cps) of outcrop, float rock and talus gravels. These recordings were made at the 28 sample locations shown on Plate 1a. In general several readings were taken, but only the highest reading was recorded.

The gamma ray spectrometer used was a GR-130 miniSPEC. This hand-held portable instrument can be operated under three modes; survey mode, dose mode and nuclide identification, (analyses) mode.

The 2006 Union Creek survey employed the survey mode. In this mode the instrument acts as scintillometer or survey meter, displaying the CURENT COUNT RATE in counts per second, (cps). A veritable-tone audio indicates radiation intensity with an automatic audio meter or user adjusted alarm level. A "chart record" of the last 60 data points can be displayed on the screen during the survey. Typically, survey mode is used to search for radioactive material or carry out total-count grid surveys.

During the 2006 survey on Union Creek, geology locations, geochemical sample locations, and radiometric reading locations were located using a GPS Map 76CSx operating in UTMs and NAD27 Canada metric mode.

Due to the limited budget for this program, duplication of Canadian Johns-Manville Company Limited sample sites was avoided. Consequently during 2006, sample locations and gamma ray spectrometer readings were taken from areas not previously surveyed by that company, that is new areas. However, geological mapping and data was compiled from Canadian Johns-Manville data, available aerial photographs, government surveys and 2006 geological mapping field work, ref: Plates 1a, 1b, 1c.

The area enclosed in surveyed claim group is composed of two different rock formations; the Cretaceous Surprise Lake alaskite batholith and the Permian Cache Creek Formation.

Both are well exposed in the area and the contact between them is sharp. Table 4 summarizes the geology.

Table 4. Summary of Geology on Upper Union Creek

Era	Period	Group/Formation/Batholith	Lithology
Cenozoic	**Pleistocene**	**Unconsolidated Deposits**	**Glacial Depositional landforms, moraines, Talus, Alluvium**
Mesozoic	**Tertiary-Cretaceous**	**Surprise Lake quartz monzonite (alaskite) Batholith**	**Quartz monzonite (alaskite) fine to coarse grained pegmatites and aplites**
Paleozoic	**Permian, (Pennsylvanian and Permian), shortened in this report to simply Permian.**	**Cache Creek Group**	**Bedded Cherts, hornfels, argillites, limestone, dykelets contact metasomatic and skarn zones.**

8.0 Geology:

8.1 Pennsylvanian-Permian Cache Creek Group.

In the area under study the Cache Creek Formation lies to the south of the Surprise Lake Quartz monzonite (alaskite) Batholith. Rocks of the Cache Creek group comprise bedded chert, argillites, crystalline limestone, and hornfels as well as variable dykes and dykelets.

Bedded chert ranges in colour from black to dull grey and cream on fresh and weathered surfaces. Bedding in the cherts is the "ribbon" variety. Individual beds cannot be traced more than a few metres or so along strike. Along a contact zone in the vicinity of the F/N zone Bedded chert was noted to strike N65˚ and dip 35˚ SE.

The rocks termed argillites in this report denote the more argillaceous cherts, shales and siltstones. On fresh and weathered surface the argillites tend to be dark grey to black. These argillites exhibit considerable shearing, and on some outcrops tend to be friable. Siltstones were not found in place in the field, but within the talus slopes. In the vicinity of the F/N zone, the argillites were noted to overlie the bedded cherts. Both bedded cherts and argillites are seen in outcrop on both sides of the Union Creek valley.

A limestone lens occurs along the contact on the west side of Union Creek. It is grey and partly friable on fresh surfaces, and appears to be massive with no distinctive bedding structures. It is intruded by at least two garnitized and hornfelsic dykelets, and at least three leucocratic actinolized dykes. These dykes are situate within contact zone, trending NW250˚-260˚and dipping 70˚-90˚N. The dykelets are 20 cm thick and at least one dykelet exhibits garnet like selvages. A limestone breccia occurs in the vicinity of the contact.[27]

8.2 Cretaceous Surprise Lake Quartz Monzonite (alaskite) Batholith

The quartz monzonites, (alaskite) form as single batholith which is considered to extend from Ruby Creek-Boulder creeks in the regions of Surprise Lake, to include regions south Gladys Lake and east and west of Trout Lake, and parts of the Snowdon Ranges east of the Gladys River Valley.

Quartz monzonites are essentially a variety of granite, with orthoclase being in excess of plagioclase. Its distinctive criterion is its lack of mafic minerals, with the exception of biotitic. Biotite generally ranges from 1%-5%.

In the Union Creek area the quartz monzonite range from fine to coarse grained. In the F/N zone, the alaskite is essentially fine to medium grained. It exhibits a light green colour on the weathered surface with up to a 2 cm rind of light iron oxide staining. The rock is very hard and blocky, with light to dark brown limonitic on joint planes. No hydrothermal alteration is present. On the fresh surface it is a light cream colour. It is frequently inequigranular in texture and contains small clots of pegmatite, some of which host smoky crystals of quartz.[28] In other areas, the quartz monzonite exhibits hydrothermal to magmatic textures.

[27] Dennis Forgeron, pers. comm. 1969

[28] ibid

8.3 Pleistocene unconsolidated Glacial Morainal Deposits.

On the east side of Union Creek, north of the F/N zone, glacial lateral and ground moraine debris is widespread, including glacial boulder fields. Down stream, some eskers are evident.

All evidence suggests ice movement was from south to north in Union Creek valley.

Several cycles of glaciation are evident, initiating as an alpine glaciation which eroded the valleys which dispersed the eroded valley material, followed by a continental glaciation, and finally a second alpine glaciation which eroded and mobilized some more debris. This debris laid down by the second alpine glaciation does not seem have any great thickness, estimated up to a maximum of 30-50metres thick.

Mountain slopes along thickness of the ice certain sections of the Surprise Lake valley appear to have escaped the continental ice sheet coverage.

Most of the glacial erratics observed appear to be quartz monzonite boulders. Permian Cache Creek boulders are not readily evident, suggesting the ice pulverized these rocks as they were plucked out from bedrock.

8.4 Structure.

8.4.1 The geological contact.

The geological contact between the Surprise Lake quartz monzonite Batholith and the Cache Creek group is very sharp. There is no evidence of a chilled zone on the alaskite side. Textural changes in the proximity of the contact range from fine to medium grained, to pegmatitic quartz monzonite. Several diorite dykes and dykelets are observed to cut the Cache Creek group. These structures have a maximum thickness of 1.5 metres thick, are sometimes porphyritic texture, and exhibit very sharp contacts with no chill zone.

A metamorphic aureole does occur within the Cache Creek group along the contact wall. This aureole is estimated to extend some 75 metres from the contact itself. Within the aureole, the bedded chert has altered to a variety of colours ranging from light tan to light lavender, with bedding not being distinctive as elsewhere.[29]

Also present are zones of biotite rich hornfels, some of which has a rusty colour on surface, suggesting disseminated sulphides.

As mentioned, the limestone has altered to skarn where it occurs within the aureole, and exhibits dykelets and at least one leucocratic dyke.

[29] ibid

8.4.2. Jointing and Faulting.

The quartz monzonites are very blocky, with some outcrops revealing three joint sets. In the F/N zone, one clean mountain slope face, some 125 metres long, appears as a joint plane. The Cache Creek bedded chert exhibits bedding jointing on many outcrops.[30]

No major faulting is evident in the claim group.

9.0 2006 Geochemistry Results

Results and locations of 2006 samples are itemized in Appendices 3.

The 2005 details of samples collected from limestone skarn, upper Union Creek were not duplicated, suggesting the gold-silver mineralized zones are very erratic and local, Ref Table 1 above.

The 2005 samples which lead to the 2006 investigations were located on Garmin Trex Legend using NAD 27 Alaska, the 2005 sample site approximately 20 metres the west of location 9, Plate 1 a. The hanging wall to the diorite dyke assumed by the writer of hosting gold mineralization, and sampled with nine rock samples, (E88413-E88421) in 2006 was not valid assumption, and the gold bearing rock sampled in 2005 is sourced elsewhere. However, given the 2006 sample pattern, the source is considered to be very small and erratic in distribution. Despite this, the hanging wall to the diorite dyke shows anomalous silver in at least two rock samples, and these are shown in Table 5 below.

Table 5. Anomalous Silver in Diorite Dyke #1.

Sample #	Easting	Northings	Claim Block	Au ppb	Ag ppm	U308 ppm	Radio-metric cps	Sample Descriptions
E-88418	597998	6607820	Union Cr.	10	20	<10	<100	Chip sample. Diorite dyke 1; sample every 2 m
E-88419	597998	6607820	Union Cr.	30	3.9	<10	<100	Chip sample. Diorite dyke 1; sample every 2 m

The rusty zone seen north of the limestone on the west side of Union Creek is believed to be contact phenomena between the quartz monzonites and the hornfelsed argillites. Sixteen samples were collected at 13 samples sites, (sites 1-13, Plate 1a), and none indicated anomalous gold or silver. It was noted the hornfels rocks within the contact zone hosted traces pyrite, some of which has oxidized giving a rusty colour to the rocks.

With respect to low grade anomalous uranium geochemistry and rock sampling carried out by Canadian Johns-Manville in 1969 was not extended in 2006.

[30] ibid

However, the total radiometric counts per second, (cps) were shown to be much higher in the quartz monzonite north of the contact than south of the contact in the Permian Cache Creek Group rocks,

These higher than background radiometric cps readings on the West side of upper Union Creek conform to the anomalous airborne radiometric survey carried out in 1969 by Seigel Associates in 1969, viz; Table 6.

Table 6: Radiometric cps recorded by Seigel Associates, 1969, adjacent to the F/N zone.

Anomaly #	Uranium	Thorium	Potassium	Broad Band
1	N/A	20	15	270
2	45	45	15	650
3	35	30	20	600
4	25	15	15	250

.
Three rock samples collected from this zone in 1969 showed traces up to 0.001% uranium, the later value being very low.

10.0 Discussion and Conclusions

Historically, for the past 107 years Atlin has been known in British Columbia as a placer gold camp. From the beginning, when placer gold was found and recorded on Pine Creek in 1898, prospectors have been exploring for a lode source to the rich placer deposits on Pine Creek, Spruce Creek, Boulder Creek and others.

This lode prospecting has almost always been focused on the Atlin Ultramafics, especially the so called listwanites. These rocks are eye catching, not only for their orange coloured alteration, but for associated quartz veins and veinlets, also the associated e mica, fuchsite or mariposite.

More important, on the Yellow Jacket claims and others on Pine Creek, as well as adjacent claims Imperial, Lakeview, and White star, sporadic gold, electrum, or refactory gold is known associated with these listwanite assemblages. Although the Yellow Jacket claim is reportedly by far the better free gold deposit, Yellow Jacket itself nor any of the above have produced more than 3 kg of gold.

J.D. Aitkin[31] suggested that, "…*the known lode of the area and perhaps some of the multitude of barren quartz veins are the roots of lodes, now completely eroded ,and may have been the source of gold.*"

Other Atlin workers, such as Ash[32] *come to the same conclusion: "the placers are considered to be derived from quartz lodes previously contained within ophiolitic crustal rocks."*

[31] Atlin Map-Area, 1959
[32] 2001

Sack[33] and others in a 2003 paper pointed out on Feather Creek 28 km east of Atlin, placer gold could not be related to ophiolitic crustal rocks as none existed there, in out crop at any rate. Instead that paper proposes a lode gold link between tin bearing quartz monzonites (alaskites) from the Surprise Lake Batholith.

Mihalynuk in a talk given to the Atlin symposium in 2004 suggests a link between Atlin placer gold and Permian limestone. This what makes the 2005 samples, (875 ppb Au, and 3.8 g/t Au) collected from the limestone lens area so intriguing. Findings also supported Rays[34] Criteria for skarn deposits:

- gold is generally associated with Ca-Fe- Mg silicates, such as clinopyroxene, garnet, epidote
- vast majority of gold skarns are hosted in calcareous rocks, (calcic subtype)
- gold is commonly present as micron-sized inclusions in sulphides…to the naked eye gold is indistinguishable from waste rock

Given the limited size of the limestone lens and its contact length with hornfels and quartz monzonites, that is approximately 500 metres, an academic interest can be continued in search of gold mineralization, but is unlikely to develop into a commercial gold property. The 2006 sampling, consisting of 15 samples from 12 locations, (locations 1-12) would have been more revealing, ref: Table 6.

With respect to the uranium potential related to the F/N zone, the quartz monzonite-Cache Creek Group is not considered a worthy commercial venture. No Traces of uranium were noted in the 2006 sampling.

The CJM 1969 analyses were obviously done under much more rigid limits than the 2006 qualitative limits, but at best only revealed traces to 0.001% U308, that is a maximum of 0.022 pounds per ton. At current prices of $54.00 per pound, the Union Creek top grade would approximate just over $1.00 per tonne in value. Not withstanding this, academic interest in this area will likely be on-going.

11.0 Recommendations

Recommendations for the future of the Union Creek Claim group where work was carried out are tabulated in Table 6 below.

Pursuing uranium in this environment is now considered of academic interest only. The Union Creek claims staked for this purpose are recommended to be allowed to lapse.

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[33] Sack, Mihalynuk, 2003?
[34] Ray, BCMR

For the two post claims, it is recommended they be held until further exploration work seeking a potential source of the placer gold on upper Wright Creek and Eagle Creek is completed.

Table 7. Recommendations for claims in area of 2006 survey.

Tenure-Two post Claims	Recommendations	Tenure-Online-Mineral Title Claims.	Recommendations
365769	Hold	519075	Allow to lapse
365770	‘’	519076	‘’
365771	‘’	519078	‘’
365772	‘’		
365783	‘’		
365784	‘’		
365785	‘’		
365786	‘’		
365787	‘’		
365788	‘’		
365789	‘’		
365790	‘’		
365791	‘’		
365792	‘’		

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Geologist

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Appendices 1

Qualifications of writer:

I**, N. Clive ASPINALL,** of Pillman Hill, the community of Atlin British Columbia, and 3A Diamond Way, Whitehorse, Yukon do hereby certify that:

- I am a geologist with offices at the above address's

- 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 of the Associations of Professional Engineers in the province of British Columbia.

- I have practiced mineral exploration for 40 years, in countries such as Libya, Saudi Arabia, North Yemen, Morocco, Indonesia, Mexico, Peru, Argentina, USA, and in the provinces and territories of Canada.

- I have no shares, or material interest in the Union Creek claims.

- I completed the geological-geochemical field work summarized in this report

I am author of report titled: **Geological-Geochemical Follow-up Investigations of a Skarn Gold Showing and Reported Higher than Background Airborne Uranium Radiometric Reading and uraniferous sampling on Upper Union Creek, Centered At 59˚ 36.416' North and 133˚ 14.211' West, Atlin Mining Division, British Columbia, Canada.**

Signed and sealed in Atlin, BC on the 12th October 2006
Respectfully submitted,

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

Appendices 2

Statement of Costs:

Field work
Field Work, Consultant, 5 days at $650.00 per day…….……………………………………………………………..$3,350.00

4 by 4 Jeep, 5 days…….……………………………………………………..$250.00

Fuel…………………………………………………………………………$65.00

Helicopter transportation, two put-outs and pick-ups……………………...$1,845.30

Rentals
GR-130 MiniSPEC scintillometer, 5 days…………………………………$500.00

GPS Garmin 76 CSXS, 5 days……………………………………………..$50.00

Sat phone, 5 days…………………………………………………………$50.00

Radio hand set/communication w/helicopter, 2 days……………………….$20.00

Freight Samples and Analyses
Freight……………………………………………………………………….$60.00.

Analyses, 43 samples…………………………………………………….$1,014.25

Report and Map Preparation
Report and map preparation, Consultant, 10 days at $650.00 per day…….$6,500.00

Total………………………………………………………………………$13,704.55

Clive Aspinall, M.Sc., P.Eng
Geologist.

Appendices 3

Geochemical Analyses

Table 8. 2006 Sample Results and Locations.

	Ref: Plate 1 a. Union Creek Rock-Talus-Soil Sampling Program, 2006, Atlin M.D (Nad 27)								
Location Samples Plate 1a	*Sample #*	*UTM-E*	*UTM-N*	*Claim Block*	*Au ppb*	*Ag ppm*	*U308 ppm*	*Radio-metric cps*	*Sample Descriptions*
1	ECTCA001	597695	6608460	Union Cr.	<5	<0.2	<10	335	Tanned Quartz Monzonite soils/talus
2	ECTCA002	597671	6608335	Union Cr.	10	0.7	<10	256	Tanned Quartz Monzonite soils/talus
2	ECFCA002	597671	6608335	Union Cr.	30	<0.2	<10	256	Weathered Coarse Grained Monzonite, rock
3	ECTCA003	579666	6608281	Union Cr.	5	0.7	<10	533	Tanned Quartz Monzonite soils/talus
4	ECTCA004	597681	6608214	Union Cr.	5	0.4	<10	305	Tanned Quartz Monzonite soils/talus-contact
5	ECTCA005	597671	6608076	Union Cr.	10	0.3	<10	127	Cache Creek Sedimentary brown soils
6	ECTCA006	597739	6608007	Union Cr.	10	<0.2	<10	117	Cache Creek Sedimentary soils
6	ECFCA006	597739	6608007	Union Cr.	25	<0.2	<10	64	Cache Creek Sedimentary rocks, qtz lenses
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9	ECFCA009	597998	6607820	Union Cr.	20	<0.2	<10	<100	Diorite dyke float rock
10	ECRCA010	597979	6607755	Union Cr.	25	<0.2	<10	<100	Fine grained diorite dyke rock
10	ECRCA010B	597979	6607755	Union Cr.	30	<0.2	<10	<100	Fine grained diorite dyke, garnets? Rock
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12	ECTCA012	598102	6608120	Union Cr.	10	<0.2	<10	347	Quartz Monzonite soils/talus/organics
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14	ECSCA015	598371	6608285	Union Cr.	10	<0.2	<10	260	Quartz Monzonite soils/talus/organics
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16	ECSCA016	598500	6608750	Union Cr.	10	0.4	<10	247	Quartz Monzonite soils/talus/organics
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18	ECSCA018	598379	6608889	Union Cr.	15	0.3	<10	240	Quartz Monzonite soils/talus/organics
19	UCTCA019	601681	6609148	Union Cr.	5	<0.2	<10	510	Quartz Monzonite soils/talus/Moraine Material
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28	UCSCA028	599230	6609815	Union Cr.	10	1.4	<10	280	Black sediment, lots of orgainics

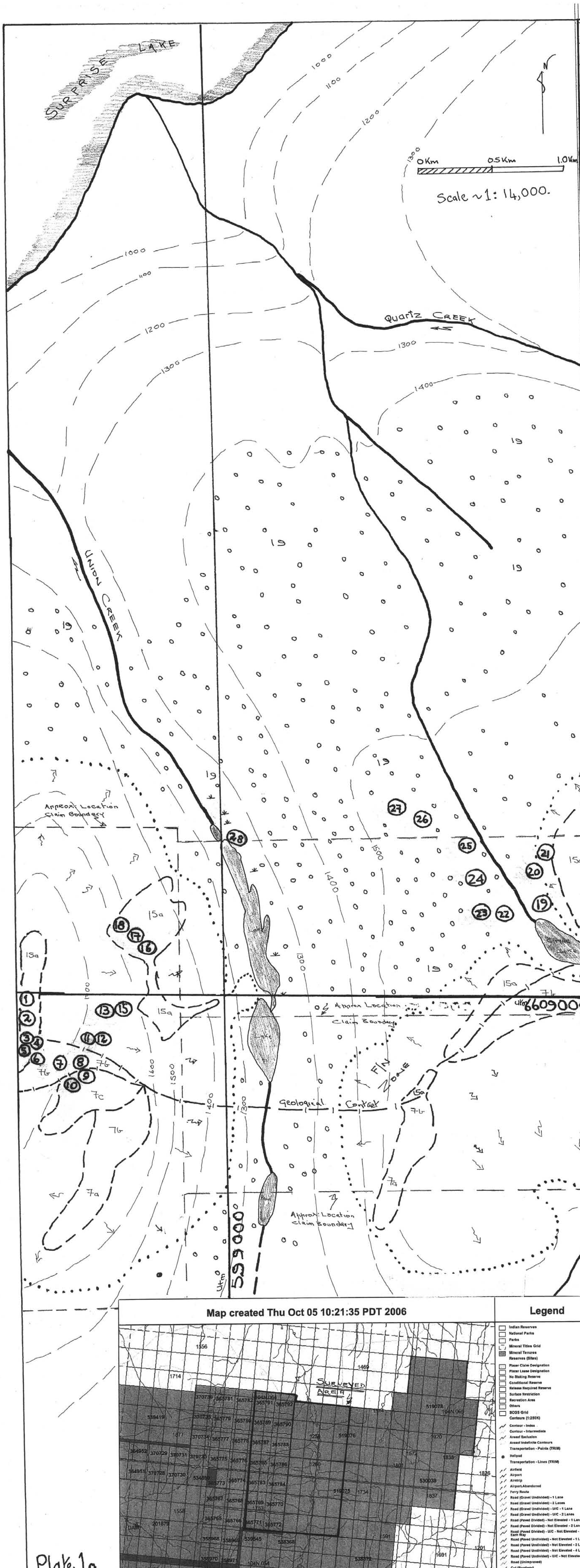
Location Samples Plate 1a	*Sample #*	*Easting*	*Northings*	*Claim Block*	*Au ppb*	*Ag ppm*	*U308 ppm*	*Radio-metric cps*	*Sample Descriptions*
9	E-88413	597998	6607820	Union Cr.	5	<0.2	<10	<100	Chip sample. Diorite dyke 1; sample every 2 m
9	E-88414	597998	6607820	Union Cr.	40	<0.2	<10	<100	Chip sample. Diorite dyke 1; sample every 2 m
9	E-88415	597998	6607820	Union Cr.	10	<0.5	<10	<100	Chip sample. Diorite dyke 1; sample every 2 m
9	E-88416	597998	6607820	Union Cr.	10	<0.2	<10	<100	Chip sample. Diorite dyke 1; sample every 2 m
9	E-88417	597998	6607820	Union Cr.	10	<0.2	<10	<100	Chip sample. Diorite dyke 1; sample every 2 m
9	E-88418	597998	6607820	Union Cr.	10	20	<10	<100	Chip sample. Diorite dyke 1; sample every 2 m
9	E-88419	597998	6607820	Union Cr.	30	3.9	<10	<100	Chip sample. Diorite dyke 1; sample every 2 m
9	E-88420	597998	6607820	Union Cr.	30	<0.2	<10	<100	Chip sample. Diorite dyke 1; sample every 2 m
9	E-88421	597998	6607820	Union Cr.	15	<0.2	<10	<100	Chip sample. Diorite dyke 1; sample every 2 m
9	E-88422	597998	6607820	Union Cr.	5	<0.2	<10	<100	Chip sample. Diorite dyke 2; sample every 2 m
9	E-88423	597998	6607820	Union Cr.	5	0.5	<10	<100	Chip sample. Diorite dyke 2; sample every 2 m
9	E-88424	597998	6607820	Union Cr.	5	<0.2	<10	<100	Grab sample, Limestone-Hornfels contact

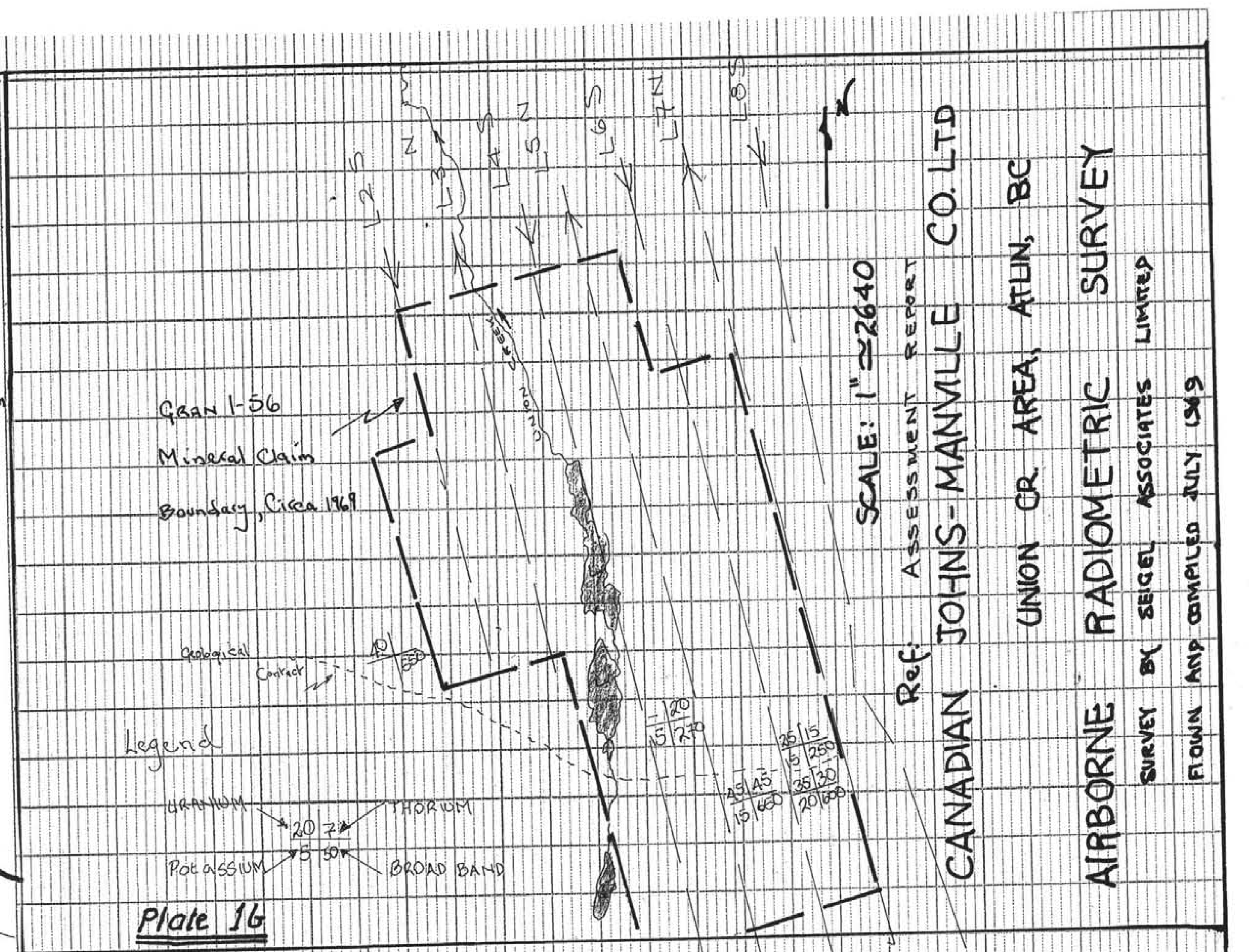
Appendices 4

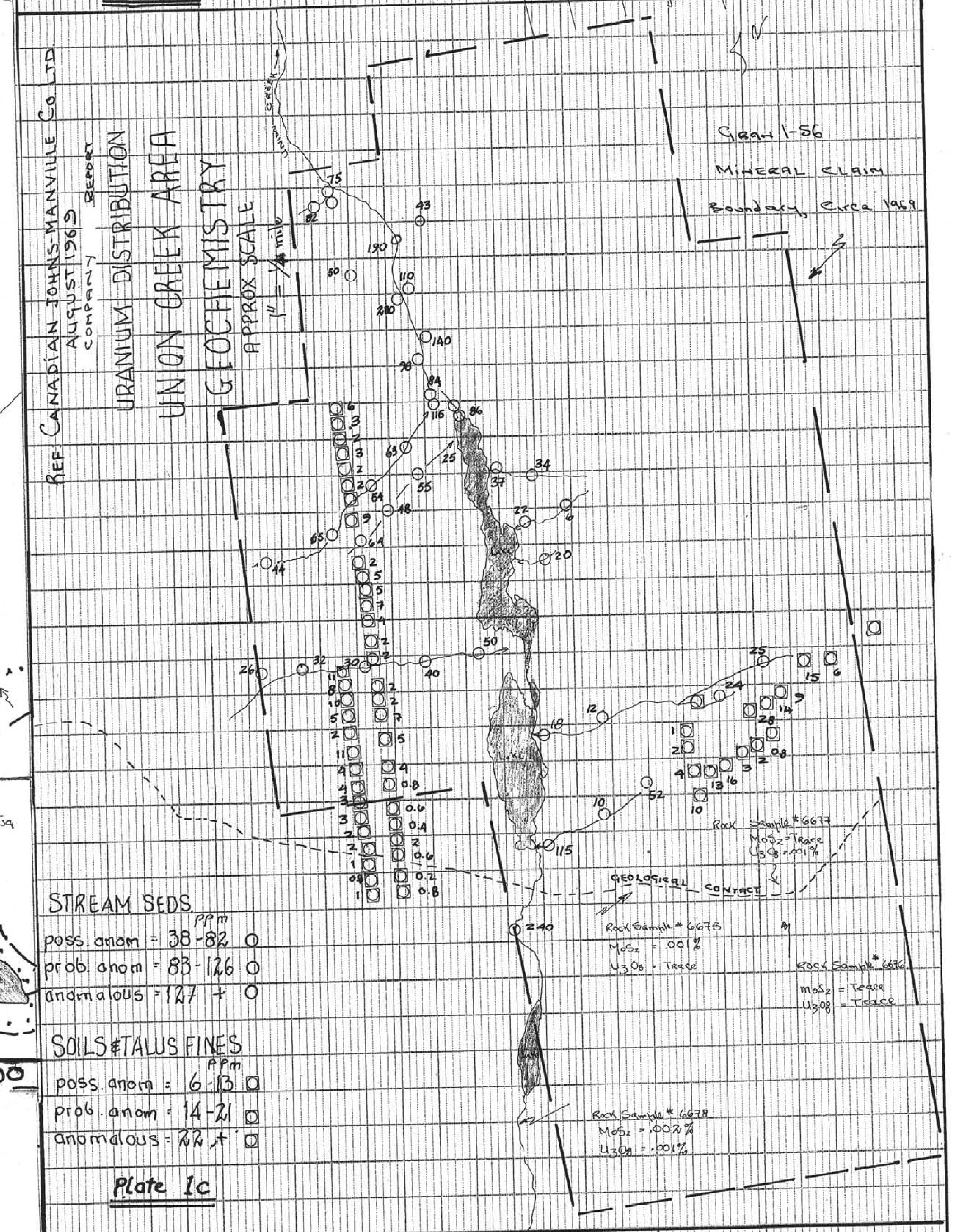
Table 9 List of Tenures included for 2006 assessment work, showing new anniversary date

Tenure Number	Tenure Type	Name	Owner	Map #	Anniversary	Status	M.D.	hectares	Tag Number
365765	Mineral	E 1	141495 (100%)	104N054	2007/SEP/30	GOOD	ATLIN	25	669826M
365766	Mineral	E 2	141495 (100%)	104N054	2007/SEP/30	GOOD	ATLIN	25	669827M
365767	Mineral	E 3	141495 (100%)	104N054	2007/SEP/30	GOOD	ATLIN	25	669828M
365768	Mineral	E 4	141495 (100%)	104N054	2007/SEP/30	GOOD	ATLIN	25	669829M
365769	Mineral	E 5	141495 (100%)	104N054	2007/SEP/30	GOOD	ATLIN	25	669830M
365770	Mineral	E 6	141495 (100%)	104N054	2007/OCT/30	GOOD	ATLIN	25	669831M
365771	Mineral	E 7	141495 (100%)	104N054	2007/SEP/30	GOOD	ATLIN	25	669832M
365772	Mineral	E 8	141495 (100%)	104N054	2007/SEP/30	GOOD	ATLIN	25	669833M
365773	Mineral	ENE 1	141495 (100%)	104N054	2007/SEP/30	GOOD	ATLIN	25	633184M
365774	Mineral	ENE 2	141495 (100%)	104N054	2007/SEP/30	GOOD	ATLIN	25	633185M
365775	Mineral	ENE 3	141495 (100%)	104N054	2007/SEP/30	GOOD	ATLIN	25	633186M
365776	Mineral	ENE 4	141495 (100%)	104N054	2007/SEP/30	GOOD	ATLIN	25	633187M
365777	Mineral	ENE 5	141495 (100%)	104N064	2007/SEP/30	GOOD	ATLIN	25	633188M
365778	Mineral	ENE 6	141495 (100%)	104N064	2007/SEP/30	GOOD	ATLIN	25	633189M
365779	Mineral	ENE 7	141495 (100%)	104N064	2007/SEP/30	GOOD	ATLIN	25	633190M
365780	Mineral	ENE 8	141495 (100%)	104N064	2007/SEP/30	GOOD	ATLIN	25	633191M
365781	Mineral	ENE 9	141495 (100%)	104N064	2007/SEP/30	GOOD	ATLIN	25	633192M
365782	Mineral	ENE 10	141495 (100%)	104N064	2007/SEP/30	GOOD	ATLIN	25	633193M
365783	Mineral	ENE 11	141495 (100%)	104N054	2007/SEP/30	GOOD	ATLIN	25	684353M
365784	Mineral	ENE 12	141495 (100%)	104N054	2007/SEP/30	GOOD	ATLIN	25	684354M
365785	Mineral	ENE 13	141495 (100%)	104N054	2007/SEP/30	GOOD	ATLIN	25	684355M
365786	Mineral	ENE 14	141495 (100%)	104N054	2007/SEP/30	GOOD	ATLIN	25	684356M
365787	Mineral	ENE 15	141495 (100%)	104N064	2007/SEP/30	GOOD	ATLIN	25	684357M
365788	Mineral	ENE 16	141495 (100%)	104N064	2007/SEP/30	GOOD	ATLIN	25	684358M
365789	Mineral	ENE 17	141495 (100%)	104N064	2007/SEP/30	GOOD	ATLIN	25	684359M
365790	Mineral	ENE 18	141495 (100%)	104N064	2007/SEP/30	GOOD	ATLIN	25	684360M
365791	Mineral	ENE 19	141495 (100%)	104N064	2007/SEP/30	GOOD	ATLIN	25	684361M
365792	Mineral	ENE 20	141495 (100%)	104N064	2007/SEP/30	GOOD	ATLIN	25	684362M

370728	Mineral	N5	141495 (100%)	104N054	2007/SEP/30	GOOD	ATLIN	25	687942M
370729	Mineral	N6	141495 (100%)	104N054	2007/SEP/30	GOOD	ATLIN	25	687943M
370730	Mineral	N7	141495 (100%)	104N054	2007/SEP/30	GOOD	ATLIN	25	687944M
370731	Mineral	N8	141495 (100%)	104N054	2007/SEP/30	GOOD	ATLIN	25	687945M
370733	Mineral	N10	141495 (100%)	104N054	2007/SEP/30	GOOD	ATLIN	25	687947M
370734	Mineral	N11	141495 (100%)	104N064	2007/SEP/30	GOOD	ATLIN	25	687951M
370735	Mineral	N12	141495 (100%)	104N064	2007/SEP/30	GOOD	ATLIN	25	687949M
370736	Mineral	N13	141495 (100%)	104N064	2007/SEP/23	GOOD	ATLIN	25	687950M
519075	Mineral	UNION CREEK	141495 (100%)	104N	2007/MAR/15	GOOD		409.554	
519076	Mineral	UNION 2	141495 (100%)	104N	2007/MAR/15	GOOD		393.04	
519078	Mineral	UNION 3	141495 (100%)	104N	2007/MAR/15	GOOD		392.966	
Total Area								**2,095.56**	







Location Samples Plate 1A	Sample #	UTM-E	UTM-N	Claim Block	Au ppb	Ag ppm	U308 ppm	Radio-metric cps	Sample Descriptions
1	ECTCA001	597695	6608460	Union Cr.	<5	<0.2	<10	335	Tanned Quartz Monzonite soils/talus
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2	ECFCA002	597671	6608335	Union Cr.	20	<0.2	<10	256	Weathered Coarse Grained Monzonite, rock
3	ECTCA003	579666	6608281	Union Cr.	5	0.7	<10	533	Tanned Quartz Monzonite soils/talus
4	ECTCA004	597681	6608214	Union Cr.	5	0.4	<10	305	Tanned Quartz Monzonite soils/talus-contact
5	ECTCA005	597671	6608076	Union Cr.	10	0.3	<10	127	Cache Creek Sedimentary brown soils
6	ECTCA006	597739	6608007	Union Cr.	10	<0.2	<10	117	Cache Creek Sedimentary soils
6	ECFCA006	597739	6608007	Union Cr.	25	<0.2	<10	64	Cache Creek Sedimentary rocks, qtz lenses
7	ECTCA007	597739	6608007	Union Cr.	10	<0.2	<10	<100	Cache Creek Sedimentary soils
8	ECSCA008	597956	6607843	Union Cr.	5	<0.2	<10	<100	Cache Creek Sedimentary soils
9	ECFCA009	597998	6607820	Union Cr.	20	<0.2	<10	<100	Diorite dyke float rock
10	ECRCA010	597979	6607755	Union Cr.	25	<0.2	<10	<100	Fine grained diorite dyke rock
10	ECRCA010B	597979	6607755	Union Cr.	30	<0.2	<10	<100	Fine grained diorite dyke, garnets? Rock
11	ECTCA011	598019	6608024	Union Cr.	10	0.2	<10	<100	Quartz Monzonite soils/talus/organics
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18	ECSCA018	598379	6608889	Union Cr.	15	0.3	<10	240	Quartz Monzonite soils/talus/organics
19	UCTCA019	601681	6609148	Union Cr.	5	<0.2	<10	510	Quartz Monzonite soils/talus/Moraine Material
20	UCTCA020	601559	6609351	Union Cr.	5	0.3	<10	810	Quartz Monzonite soils/talus/Moraine Material
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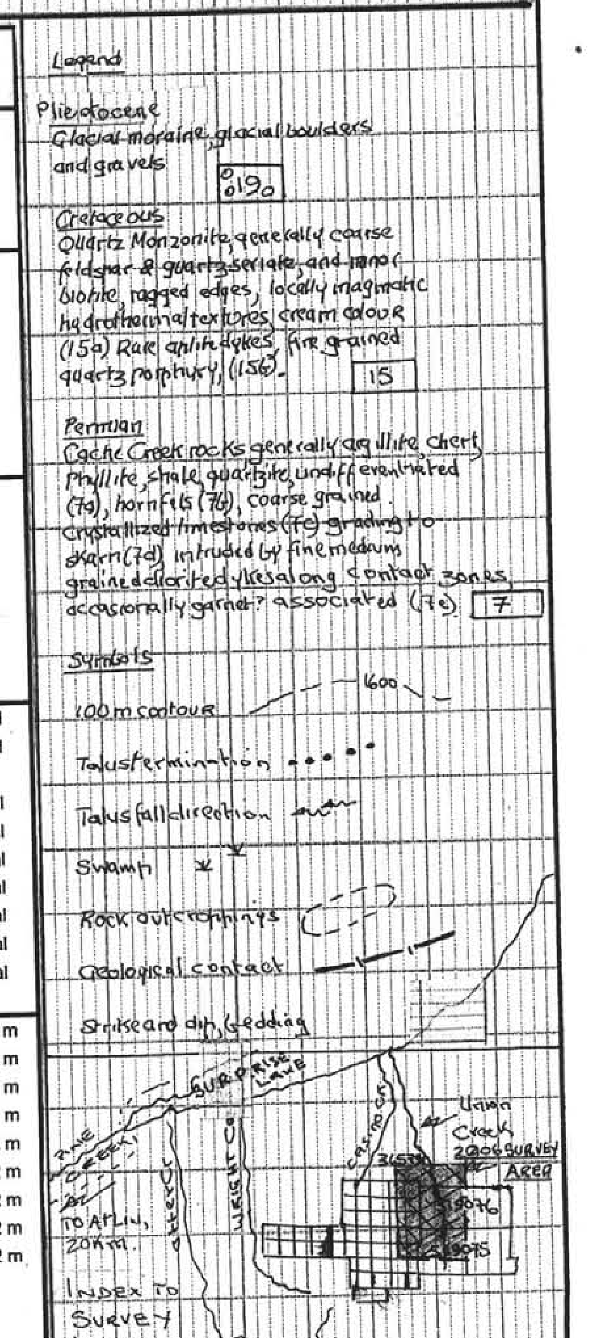
9	E-88422	597998	6607820	Union Cr.	5	<0.2	<10	<100	Chip sample. Diorite dyke 2;
9	E-88423	597998	6607820	Union Cr.	5	0.5	<10	<100	Chip sample. Diorite dyke 2;
9	E-88424	597998	6607820	Union Cr.	5	<0.2	<10	<100	Grab sample, Limestone-Hornfels contact

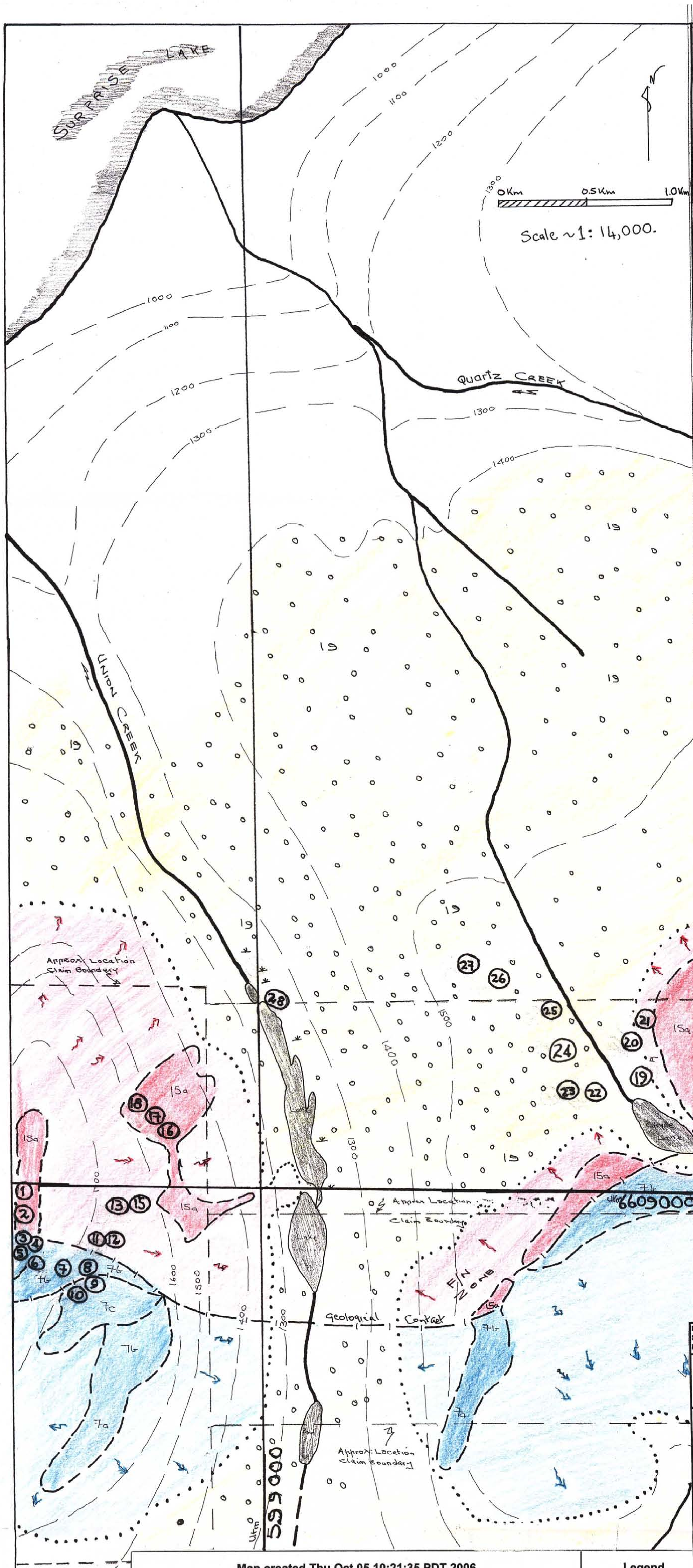


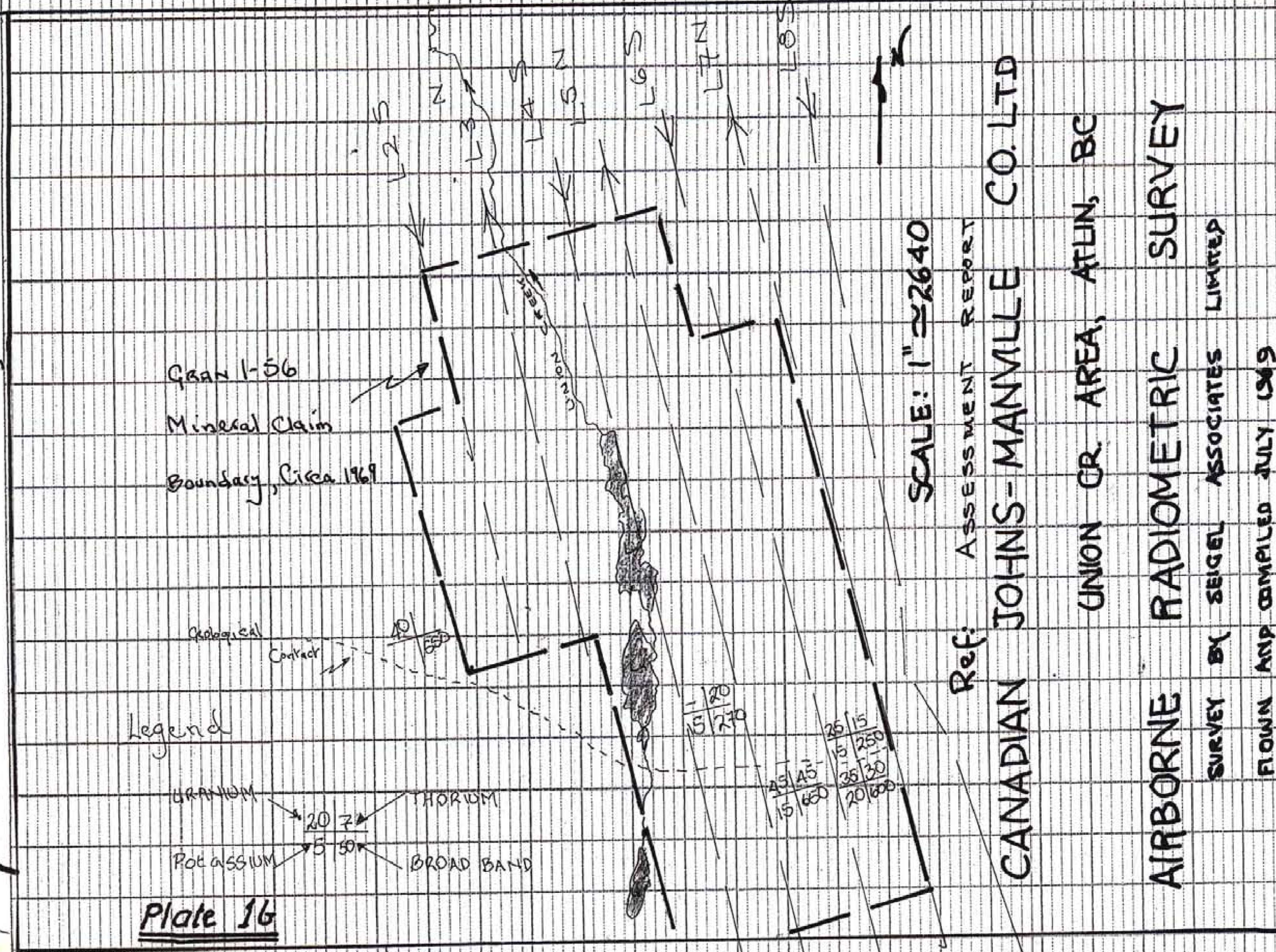
Clive Aspinall Geological

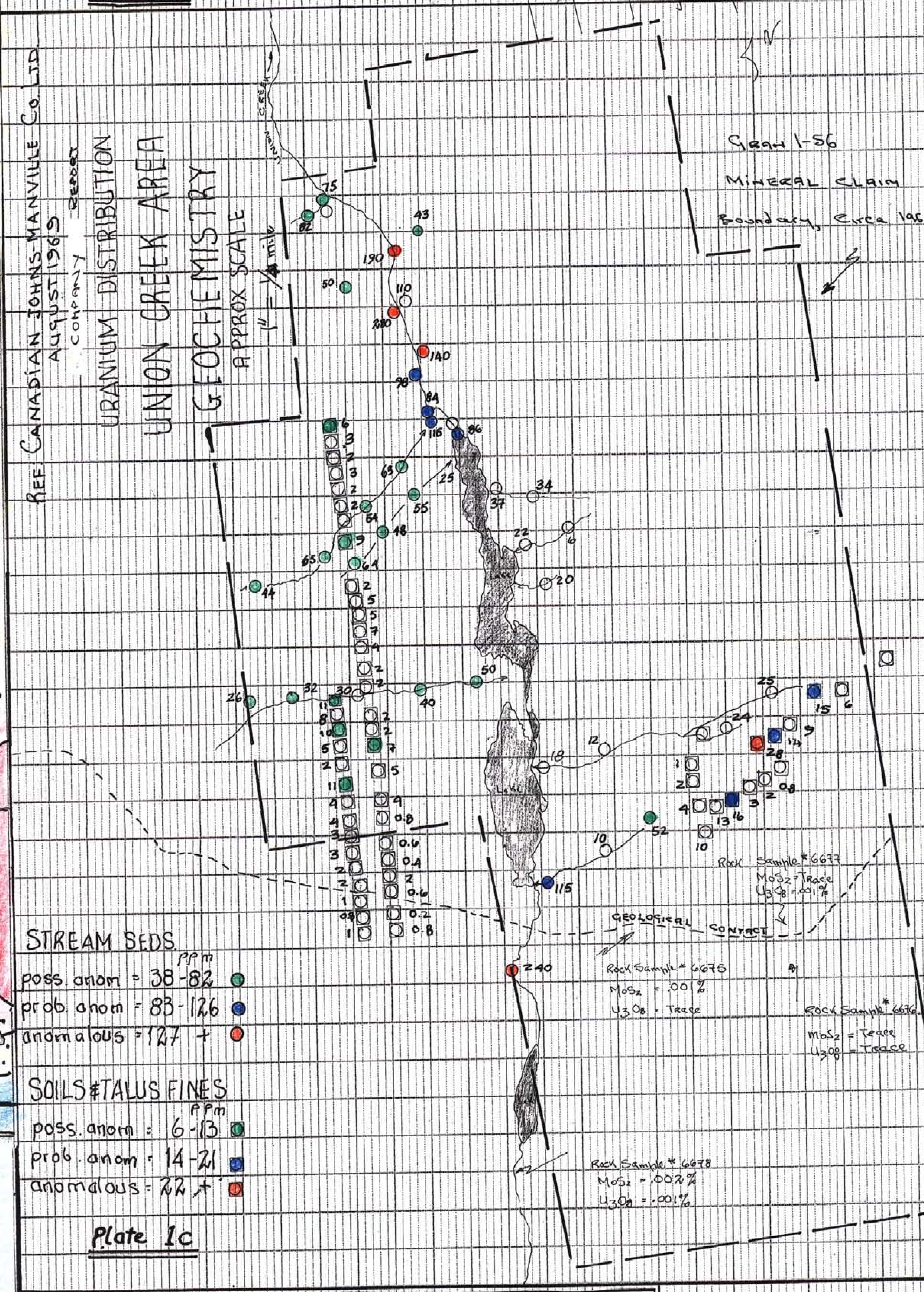
2006 Geology and Geochemistry Survey on Union Creek, Atlin, MD for Gold and Uranium, Plate 1A, with Background Data on Previous Work by Johns-Manville Co. Ltd, circa 1969, Plates 1b and 1c.

Date: October, 2006

Plate 1a generated in the field using GPS data NOT TO BE USED FOR NAVIGATION







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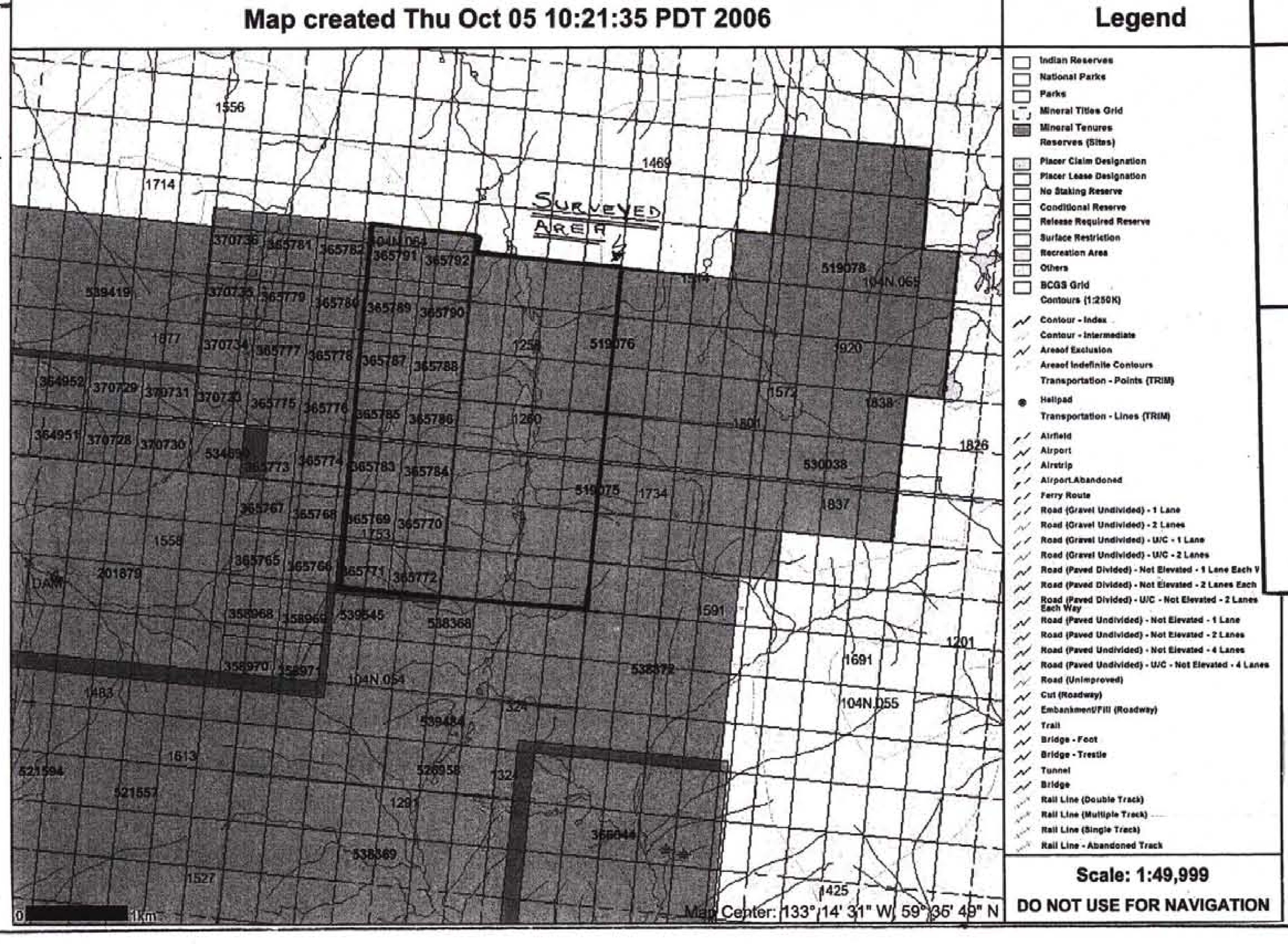
20	UCTCA020	601559	6609351	Union Cr.	5	0.3	<10	810	Quartz Monzonite soils/talus/Moraine Material
20	UCTCA020	601559	6609351	Union Cr.	30	0.2	<10	810	Quartz Monzonite Float boulder
21	UCTCA021	601632	6609416	Union Cr.	10	0.2	<10	437	Quartz Monzonite soils/talus/Moraine Material
22	UCTCA022	601384	6609013	Union Cr.	10	<0.2	<10	209	Quartz Monzonite soils/talus/Moraine Material
23	UCTCA023	601185	6609011	Union Cr.	5	<0.2	<10	617	Quartz Monzonite soils/talus/Moraine Material
24	UCTCA024	601152	6609343	Union Cr.	5	<0.2	<10	432	Quartz Monzonite soils/talus/Moraine Material
25	UCTCA025	601047	6609531	Union Cr.	5	<0.2	<10	748	Quartz Monzonite soils/talus/Moraine Material
26	UCTCA026	600793	6609758	Union Cr.	10	<0.2	<10	270	Quartz Monzonite soils/talus/Moraine Material
27	UCTCA027	600532	6609857	Union Cr.	15	<0.2	<10	310	Quartz Monzonite soils/talus/Moraine Material
28	UCSCA028	599230	6609815	Union Cr.	10	1.4	<10	280	Black sediment, lots of orgainics
9	E-88413	597998	6607820	Union Cr.	5	<0.2	<10	< 100	Chip sample. Diorite dyke 1; sample every 2 m
9	E-88414	597998	6607820	Union Cr.	40	<0.2	<10	< 100	Chip sample. Diorite dyke 1; sample every 2 m
9	E-88415	597998	6607820	Union Cr.	10	0.5	<10	< 100	Chip sample. Diorite dyke 1; sample every 2 m
9	E-88416	597998	6607820	Union Cr.	10	<0.2	<10	< 100	Chip sample. Diorite dyke 1; sample every 2 m
9	E-88417	597998	6607820	Union Cr.	10	<0.2	<10	< 100	Chip sample. Diorite dyke 1; sample every 2 m
9	E-88418	597998	6607820	Union Cr.	10	20.0	<10	< 100	Chip sample. Diorite dyke 1; sample every 2 m
9	E-88419	597998	6607820	Union Cr.	30	3.9	<10	< 100	Chip sample. Diorite dyke 1; sample every 2 m
9	E-88420	597998	6607820	Union Cr.	30	<0.2	<10	< 100	Chip sample. Diorite dyke 1; sample every 2 m
9	E-88421	597998	6607820	Union Cr.	15	<0.2	<10	< 100	Chip sample. Diorite dyke 1; sample every 2 m
9	E-88422	597998	6607820	Union Cr.	5	<0.2	<10	< 100	Chip sample. Diorite dyke 2;
9	E-88423	597998	6607820	Union Cr.	5	0.5	<10	< 100	Chip sample. Diorite dyke 2;
9	E-88424	597998	6607820	Union Cr.	5	<0.2	<10	< 100	Grab sample, Limestone-Hornfels contact



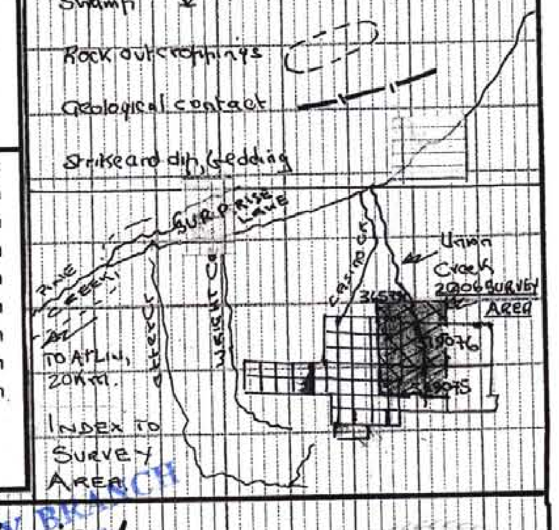
Legend

Pleistocene
Glacial moraine, glacial boulders and gravels — 19

Cretaceous
Quartz Monzonite, generally coarse feldspar & quartz seriate, and minor biotite, ragged edges, locally magmatic hydrothermal textures, cream colour (15a) Rare aplite dykes, fine grained quartz porphyry, (15b). — 15

Permian
Cache Creek rocks generally argillite, chert, phyllite, shale, quartzite, undifferentiated (7a), hornfels (7b), coarse grained crystallized limestones (7c) grading to skarn (7d) intruded by fine medium grained diorite dykes along contact zones, occasionally garnet? associated (7e). — 7

Symbols
100 m contour
Talus termination
Talus fall direction
Swamp
Rock outcroppings
Geological contact
Strike and dip, bedding



Clive Aspinall Geological

2006 Geology and Geochemistry Survey on Union Creek, Atlin, MD for Gold and Uranium, Plate 1A, with Background Data on Previous Work by Johns-Manville Co. Ltd, circa 1969, Plates 1b and 1c.

Date: October, 2006

Plate 1a generated in the field using GPS DATA. NOT TO BE USED FOR NAVIGATION.