

PLACER GOLD EXPLORATION REPORT

REED-KELLI CREEK PLACER CLAIM GROUP GW01054

Whitehorse Mining Division

Donjek River Reed Creek Area

Map Sheet 115G12 UTM Zone 7 NAD 83

61°33' N Latitude, 139°37' W Longitude

Report by: G. Gutrath, Geologist, P.Eng.

Date: February 18, 2015

INTRODUCTION

This report is written on behalf of the claim owners listed in Appendix C.

The time spent on the property and the cost of the program is outlined in Appendix B.

The writer carried out geological mapping and sampling programs on the property in 2011 and 2013. This work continued in 2014 and at the request of the placer claim owners an evaluation of the placer gold potential was undertaken at the start of the 2014 program.

The writer is indebted to Dr. Getsinger for reviewing the program she carried out on the property in 1998. The late Larry Tremblay was able to personally discuss with her the placer mining history and the mining and exploration carried out under his direction. The placer mining under the on-site management of Darrel Duensing had ceased in 1986 but he made time available at the property to review the placer mining history with Dr. Getsinger.

The writer was also able to discuss the placer mining history with Mr. Duensing in 2011 and review his assessment of additional potential placer reserves within the claim group. Mr. Duensing passed away in December, 2013.

Mr. Lorne Smith of Haines Junction who assisted in the field program in 2013 and 2014 was also very familiar with the placer mining carried out on the property. He had operated a small backhoe-slucice plant on the property in the early 2000s period between the Lower Canyon and the Camp. His candid opinion and overview on the placer project was very helpful.

The writer was ably assisted in the field by Mr. Fred Erler who was very helpful in carrying out a large portion of the placer gold panning program.

Mr. Lorne Smith of Haines Junction, Mr. Denis Dixon of Burwash Landing, and Mrs. Louise Bouvier of Destruction Bay provided transportation and logistical support for the field program.

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Nuggets from placer mining

Large nugget from placer mining

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Area 1 looking upstream in at placer mined stacked tailings piles

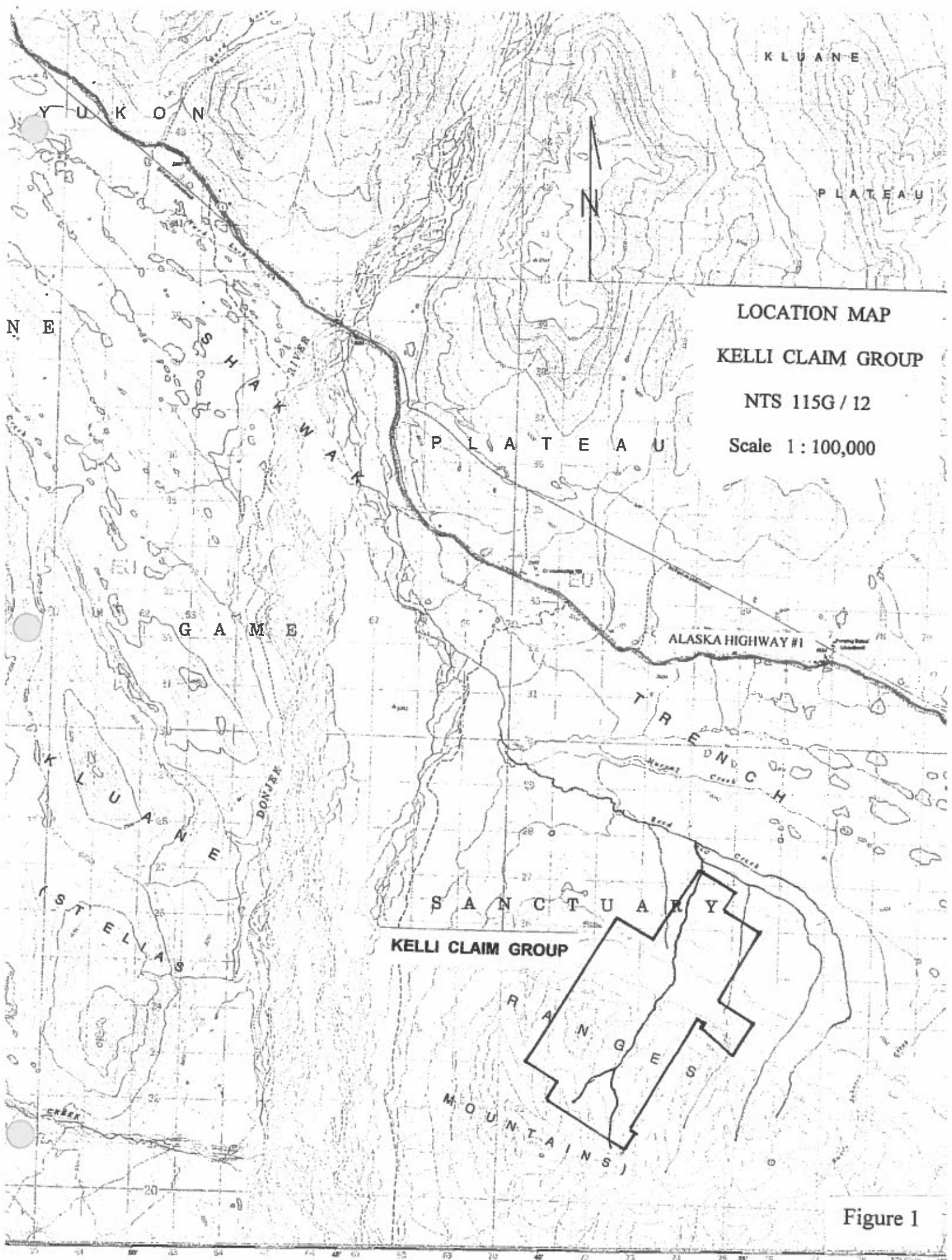
Area 3 boulder cobble gravels in thawed channel looking south at bank of glacial till
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Area 3 poorly sorted glacial outwash gravel-till exposed in 50 m. high bank at the
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Page 8/9 : Area 1 potential reserve area outlined along the west side(left limit) of Reed-Kelli
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LOCATION MAP
KELLI CLAIM GROUP
NTS 115G/12
Scale 1:100,000

Figure 1

LOCATION

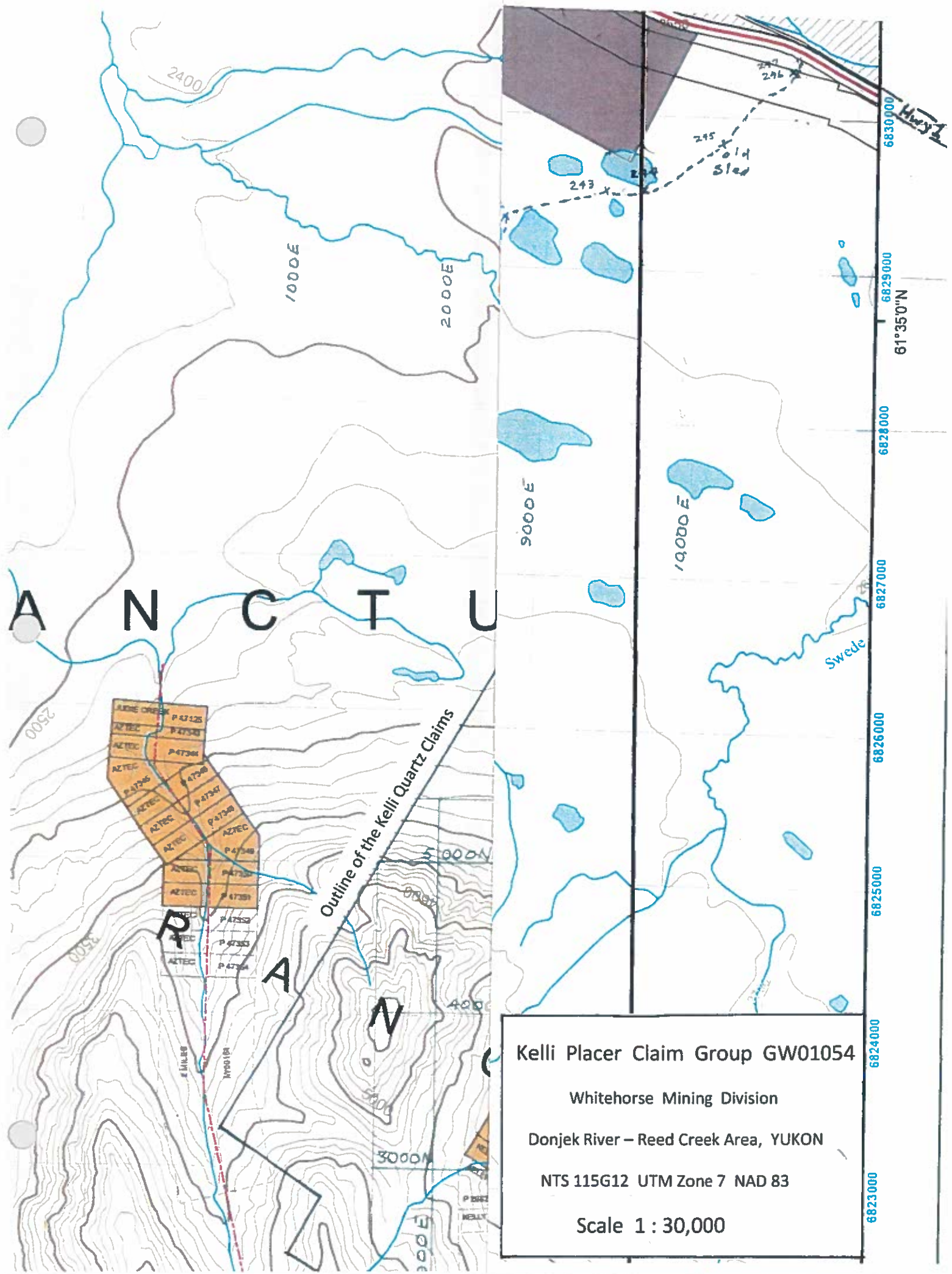
The Kelli-Reed Creek Placer Claim Group #GW01054 (the "Kelli Placer Group") is located in the southwest Yukon Territory on the northeast facing slope of the Kluane Range. The Kelli Placer Group covers a northerly flowing tributary of Reed Creek that continues westerly along the south edge of the Kluane Range that borders the north-easterly trending Shakwak Trench. Over a distance of 7 km Reed Creek joins the Donjek River, a major 3 km wide, northerly flowing, braided glacial stream. The Kelli Placer Group is within the Kluane Game Sanctuary that is a buffer wildlife protected area between the Kluane National Park to the southeast and the Alaska Highway to the north. The Kelli Placer Group is located on NTS Map 115G/12. The centre of the Kelli Placer Group is approximately at UTM Coordinate 682400 N / 573000 E Zone 7, NAD 83.

PHYSIOGRAPHY

The Kelli Placer Group is centred on a north-northeasterly flowing tributary of Reed Creek (Reed-Kelli Creek) that starts at the north boundary of the Kelli Quartz claim Group (*Fig. ?*) at an elevation of 2,600 feet (792 m). The placer claims start upstream 2 kilometres at the Terry 4 claim at an elevation of 2,925 feet (892 m). The most southerly claim is the Kelli 9 covering the Reed-Kelli Creek Forks at an elevation of 4,100 feet (1,250 m). The camp and helicopter pad are located on the stream outwash boulder-gravel fan at an elevation of 3,083 feet (940 m). From the camp going upstream it is 420 m to the start of the creek canyon. From the start of the canyon the stream gradient increases from +6° to +15° over a distance of 800 m to the upstream end of the Upper Canyon (Map 1). From the south end of the very steep walled (+20° to +45°) stream canyon the valley widens and the stream gradient drops to +5° to +7° over the next 1 km to the south boundary of the Kelli Placer Group. The stream valley is bounded by northerly trending ridges that reach an elevation of 5,500 ft. (1,675 m).

From the Lower to the Upper Canyon the stream occupies a distinct steep walled "V" shaped valley that has not been subjected to glaciations. Upstream from the Upper Canyon the valley widens and at the forks, there is thick section of outwash, poorly sorted glacial cobble boulder till on both sides of the creek. The deposits probably originated from cirque forming mountain glaciers at the headwaters of the stream. The entire area would have been covered by glacial ice during the last ice age and glacial till has been reported along the top of the canyon wall. The present shape of the Shakwak Trench has been formed by glaciation resulting in a series of north-westerly trending features such as the elongate lakes and drainage pattern in the Shakwak Trench. This period of glaciations would also have truncated the northerly trending "V" shaped valleys along the northeasterly facing Kluane Range in the general Kelli Placer Group area.

Vegetation in the Kelli Placer Group area is controlled primarily by elevation and by permafrost. In the permafrost areas at lower elevations along the Shakwak Trench stunted black spruce predominates. As one goes up the stream valley to the camp along the outwash fan there are tall spruce reaching 0.6 m. in diameter that are commonly indicative of thawed ground. Both sides of the fan are bordered by muskeg with thick moss and stunted black spruce indicating permafrost. Going up the creek through the Lower to Upper Canyons, if the walls are not steep with barren outcrop and active talus, the slopes are covered by almost impenetrable alder. Alder continues to predominate on both sides of the valley to an elevation of 3,800 ft (1,158 m) to 4,000 ft (1,220 m) and is replaced by



Kelli Placer Claim Group GW01054
 Whitehorse Mining Division
 Donjek River – Reed Creek Area, YUKON
 NTS 115G12 UTM Zone 7 NAD 83
 Scale 1 : 30,000

willow and scattered stands of stunted black spruce. At the 4,500 ft (1,370 m) elevation scattered willow and grass forms a classic alpine environment.

CLIMATE

The climate of the Kelli Placer Group area is affected by three dominant physiographic features. To the west lies the St. Elias Mountains occupied in part by the largest non-polar continental ice field in the world with elevations ranging up to (Mt. Logan) 5,959 m (19,550 ft). The Kelli Placer Group area is located on the east flank (lee side) of this mountain range and is protected from the direct effect of the coastal weather. However, coastal weather can reach the Kelli Placer Group area by the Chatham Strait in Alaska and continuing northwestward along the low lying valleys that occupy the Denali Fault/Shakwak Trench and continuing into Alaska. In turn this long lineament can funnel northern storms southeastward into the Reed Creek – Kluane Lake area. The narrow Shakwak Trench is bordered to the northeast in the Kluane Lake area by the Ruby Range and the Yukon Plateau highlands, a dry climatic belt with record setting low temperatures (Snag) in the winter.

The climatic data for the Kluane Lake – Reed Creek area is based on information from the Environment Canada Weather Station at Burwash Landing.

Temperature

The daily average temperature for the coldest month, December, is -19.8°C and the warmest month, July, is 12.8°C . The extreme maximum was recorded in June, 1969 at $+31.7^{\circ}\text{C}$ and the extreme minimum was at -55°C recorded in 1968.

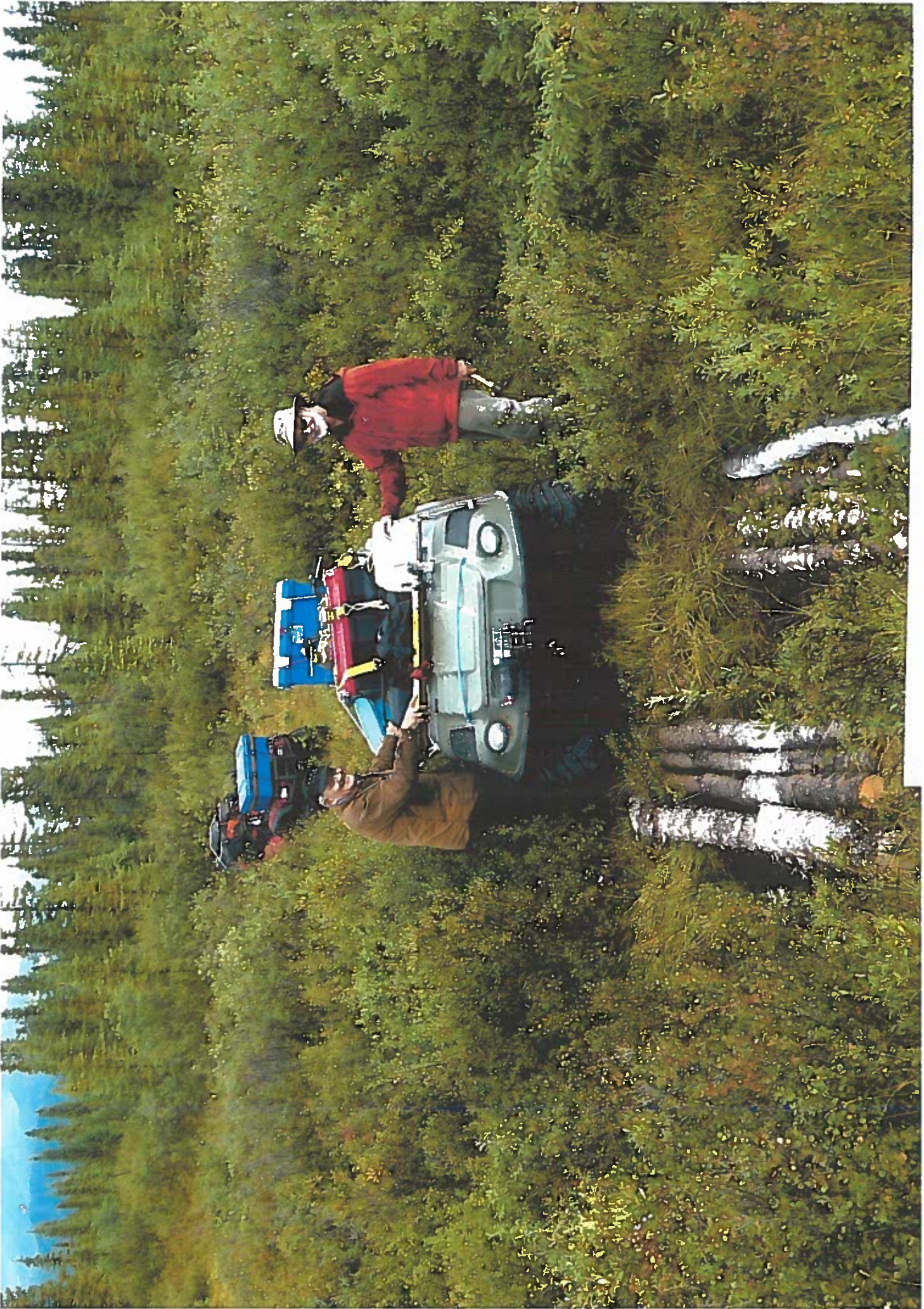
Precipitation

The total average rainfall is 19 cm falling between May and September. The extreme daily rainfall was 3.84 cm in 1968. The maximum average snow depth for February is 18 cm. The extreme snow depth was 104 cm in 1967.

Burwash Landing is at an elevation of 807 m (2,647 ft) and the Kelli Placer Group has an elevation ranging from 1,067 m (3,500 ft) to 1,372 m (4,500 ft). The higher elevation will result in a moderate lower average temperature and a higher average level of precipitation than Burwash Landing.

ACCESS

The general Kelli Placer Group area via the paved Alaska Highway is 340 km west from Whitehorse, or 170 km from Haines Junction, the local service centre. From the Alaska Highway looking due south the camp on the Kelli Placer Group is visible over a distance of 7 km. The start of the winter haul road and the summer ATV trail leaves the Alaska Highway at UTM coordinate 580651 E / 6830392 N and goes south-easterly for a distance of 10 km crossing the Shakwak Trench through continuous swamp, bypassing a number of small lakes and crossing 3 small streams to



reach the start of the trail on the gravel fan leading to the camp. An Argo and two ATVs made the trip to the camp from the Alaska Highway in three hours including bridge repairs.

From the camp upstream to the mouth of the Lower Canyon the road is in good condition and is accessible by ATV to the start of the Middle Canyon. Continuing upstream there are a few small washouts and talus slides but the base of the road is in good condition.

The construction of the road up the canyons was a remarkable achievement undertaken by Darrel Duensing. A D9H bulldozer was used to push large (up to 3 m. diameter) round granite boulders in a row to form the outer base wall of the road. ^(Photo) A front-end loader then carried tailings from the sluice plant to fill behind the boulders and the canyon wall. Since 1986, when upstream mining ceased, there have been numerous flash floods through the narrow canyon but regardless the road has remained intact. The bigger program with road access through the canyon is the continuous down slope migration of talus boulders across the road. The talus can be easily removed by a small bulldozer.

Helicopter service is available from Haines Junction with a suitable staging area on the Alaska Highway at Mile 1118. There is a good helicopter pad at the campsite.

HISTORY

The history of the property has been reviewed in detail in the 2012 Geological Report by the writer. However, it is repeated below in this report because so much of the history pertains to placer gold mining.

“The Kelli Claim Group covering the northerly flowing tributary of Reed Creek is reported by Trevor Bremner, Ministry of Mines, Geologist in Yukon Exploration 1990 (INAC 1991, p 60-64) to have been placer mined between 1935 and 1939. Between 1983 and 1988 Dublin Gulch Placers, headed by Darrel Duensing, placer mined the creek and reported production of 1,275 oz of gold. Darrel Duensing also estimated production of 725 oz of gold for the 1935 to 1939 period.

Dr. Jennifer Getsinger in her report on the Kelli Property, October 1998 detailed under History, information provided by the late Larry Tremblay. Mr. Tremblay was a biologist who worked for Parks Canada and was based at Haines Junction. During his tenure with Parks Canada he became very familiar with the Kluane National Park and the people who lived and worked in the southwest Yukon Territory. Mr. Tremblay’s overview of the local history in the Kluane Range was recorded by Dr. Getsinger as follows:

“In addition to the literature search, some information was gathered by talking to Larry Tremblay (pers. comm., August 1998), about what he knew about the history of mining on the Kelli property. He had heard some of the history from another person who used to work the claims in the 1950’s. Jack Lemoygen, from Teslin, staked this creek for placer in 1952, and said you could walk into four tunnels then. He claimed that the California man who owned the placer claim in the 1930’s paid his workers bonuses of 52 oz of gold a year, so they must have been doing well. There were up to a half a dozen Swedes working there for several years, and they were quite private about what they were doing, not local, and paid well not to talk to other locals. Other local hearsay reported by Larry



1980s placer mining in Area 1 downstream from Canyon 1 (L.Trembley photo)



**1 - Lower Canyon, 2 - Middle Canyon, 3 - Old Timers,
4 - Middle Canyon in place, Most other gold recovered
from in place. 5 - platinum nuggets**

Gold nuggets recovered by 1980s placer mining. (Tremblay photo)



Gold nuggets from 1980s placer mining. (Tremblay photo)

Tremblay includes stories from Harry Frome over at Arch Creek, from old Frank with the packhorses, or about the Jacquot brothers, who used to supply grubstakes for prospectors in the Kluane Ranges, and who lived at Burwash Landing. Mr. Tremblay himself, as an experienced biologist, did a dendrochronologic (tree-ring dating) study of the ruins of three old cabins (one of which was 40 feet long) found near his present camp site, and determined that they were built of logs from trees that were cut down in the periods 1904-1915, and 1928-1935. He said there would have been no reason to build such substantial residences in that area if the occupants were merely hunting, rather than mining. One remnant corner of an old log cabin was observed during our August 1998 field visit across the creek from the trailer camp, up in an area of birch and alder forest on an old alluvial surface; unfortunately that area has been largely covered by bulldozed gravel from more recent placer workings. Many trenches, holes, workings, and old adits have been found in the area of Reed-Kelli Creek, more easily identifiable in 1985 when Tremblay and Duensing first began working there, although some were already caved in and inaccessible. It is difficult to tell how old various trenches would have been, due to the massive rearrangement of loose materials in the canyon by bulldozing and a flood in the late 1980's. Larry Tremblay is certain that the "old timers" who worked this creek were not only placer mining but investigating bedrock occurrences of gold as well as copper, during the 1930's. He said they took out particularly the green mariposite rock, and piled up wall rock slabs at the portals of their underground workings; he said the old short-handled shovels he found supported the idea of underground workings as well. It is presumed from this type of information that there must have been enough gold to provide not only grub but profits for all of these men. It is also rumored that one of the reasons that the government reports are so uninformative about this area is that the records of the Whitehorse mining recorder's office were transferred at some time to Dawson, and subsequently were lost in a flood or some other natural disaster. It also appears to be commonplace that placer miners report less productivity to the government than they may have actually taken home in the form of gold nuggets. For instance, the 2000 oz said to have been reported by Darrel Duensing by Bremner (1991) as coming out of the Kelli claims area in the 1930's and 1980's, was re-estimated by both Larry Tremblay and Darrel Duensing in August 1998 to have been at least 3000 oz or more, only counting what came out in their own tenure of the 1980's and 90's. (This may have included some of the takings of a family from Arizona, a grandfather, father, and son team, who did placer assessment work on the property in 1982, including two nuggets of over 1 oz gold each)."

In 2004 Mr. Tremblay carried out a diamond drilling program at the start of the Lower Canyon. Five BQ holes were drilled totaling 305 m. This program is reviewed in this report and is summarized in Appendix F, 2004 Diamond Drilling Program.

In 2005 a trenching program using a Cobra Drill and dynamite was carried out in the Middle Canyon in the area of the "old timers' workings".

It was reported to the writer that limited placer mining was carried out between the camp and the start of the Lower Canyon in 2004 and possibly 2005 using a backhoe, bulldozer and a sluice plant."

REGIONAL GEOLOGY

The Kluane Range forms the northeast margin of the St. Elias Mountains that border the southwestern edge of the Coast Belt. They are within the northern extension of the Insular Belt in the southwestern Yukon Territory and are largely to the southwest of the Denali Fault System. The St. Elias Mountains are predominantly underlain by

Alexander Terrane consisting of a thick sequence of mainly layered Paleozoic strata. During the late Triassic there was widespread metamorphism and deformation. The property area is located within a Wrangalia segment (WZ) between Alexander Terrane and the Denali Fault. The segment (WZ) may have been moved northeast of the Alexander Terrane by large dextral displacements along the Denali Fault (Campbell and Dodds, 1983). In the Kelli Placer Group area the Denali Fault occupies the Shakwak Trench. The Wrangalia Terrane to the southwest of the Shakwak Trench in the Quill Creek – Donjek River area has been intruded by granitic to ultramafic bodies. The best known ultramafic intrusion in this area is the Quill Creek complex of Cretaceous age that hosts a nickel-copper massive sulfide deposit with PGE values.

In the Kelli Placer Group area of the Kluane Range the predominant rocks are Permian Pennsylvanian andesites covered by shales and thin bedded limestone. These units are repeated by a complex series of faults. Oligocene dikes in the area have been sheared indicating that the faulting is Tertiary or younger (T. Bremner, 1990).

2014 EXPLORATION PROGRAM

The 2014 exploration program on the Kelli Placer Group is made up of three overlapping programs. Geological Mapping on a scale of 1:000, Geochemical Soil and Silt Sampling plotted on a 1:3000 and 1:000 base maps with the first phase of the program being an evaluation of the Reed-Kelli Creek Placer Claim Group GW01054. The field work on the property was a complete on-site evaluation of the placer history and how it related to the general surficial geology, the effects of glaciation and bedrock geology on placer gold distribution. The writer is fortunate to have been given, by the Tremblay family, all the reporting and photographs by the late Larry Tremblay.

Mr. Tremblay was the original Placer and Quartz Claim owner and managed the project on behalf of an investor partnership for many years. He was a prolific writer, sample collector and photographer. Some of his photographs will be included in this report.

The writer was particularly interested in evaluating the placer gold reserve potential in the area downstream (north) from the outlet of Reed-Kelli Creek from the Lower Canyon. An extensive reconnaissance program of pan sampling was carried out downstream as far as the camp site, a distance of 450 m.

The second area of placer gold reserve potential is the section of Reed-Kelli Creek upstream of the Upper Canyon to the south and of the placer claims, Kelly 9. The creek divides into two streams at this point and is referred to as the Forks. No sampling was done in this section in 2014. Efforts were made to locate various hardrock mineral showings along the creek bank referred to in reports by Mr. Tremblay and Jean Pautler.

PROPERTY GEOLOGY

General

The primary objective of the 2014 program was to continue the geological mapping on a scale of 1:1000 through the Lower Canyon and sample prospective mineralized zones. The division of the geology into Stratigraphy

and Intrusive units was outlined in the 2012 and 2013 reports and supported by the work done by Dr. Gettsinger and Mr. Bremner. This is a brief summary of the property geology.

Statigraphy

The layered rocks exposed from the camp area upstream to the Middle Canyon (Geology Map 1 1:1000, 2013) are divided into four units designated **pc** (phyllitic carbonate), **gs** (greenstone/meta volcanic), **gs (fp)** (subvolcanic greenstone and/or an intrusive feldspar porphyry), and **bgpl** (black graphitic phyllite with interbedded limestone). These units have been interpreted as being Pennsylvanian to Permian in age and part of the Skolai Group. The writer divided the **gs** unit into **gs** and **gs(fp)** to differentiate the marked contrast between the two units:

gs dark brown andesite often foliated to a chloritic schist, highly fractured with pyrite content from 1% to 10%, pyrrhotite trace to 1% and magnetite 1%. Widely spaced, flat pyritic quartz veins of variable width cut across the unit.

gs(fp) grey, possibly subvolcanic fine-grained to porphyritic andesite or intrusive with blocky, coarse fracturing with pyrite, less than 1%.

The **bgpl** unit is the principal unit downstream from the Lower Canyon to the campsite.

Intrusive Rocks

The layered rocks are intruded by dikes and sills of Oligocene to Miocene age (date of 23 Ma, ref. Bremner, 1991). Both Getsinger and Bremner agree that this intrusive is a feldspar hornblende porphyry. The writer mapped the intrusives as two separate rock types.

dd light orange weathering dacite dike, fine grained to aphanitic with an absence of porphyritic texture. In the fresh, fine grained dacite crystalline hornblende “blades” make up 1% to 2% of the ground mass

fp light grey subhedral medium grained feldspar phenocrysts in an aphanitic to fine grained feldspar rich ground mass

Surficial Geology

The surficial geology will be broken into three areas (Map 1) with reference to vegetation and placer mining.

Area 1: Downstream to the north starting at the outlet of the Lower Canyon (Map 1 and 2) and continuing 300 m north of the camp.

Area 2: The section of Reed-Kelli Creek bounded by Lower, Middle and Upper Canyons



Area 2 looking north from west(right limit) side of Lower Canyon at placer mined area in Area 1.

Camp is small white object in trees with helicopter pad in the centre left.

Shakwak Trench in the background.

Area 3: The section of Reed-Kelli Creek from the Upper Canyon where the stream gradient drops at the start of the Upstream South Target Area for Placer Gold Reserves to the Forks (Map 1).

Area 1

Starting at the north end of the area that has been bulldozer stripped to virgin gravel and continuing south to the area of the helicopter pad and camp at an elevation of 923 m the stream gradient is in the order of 5%. The exposed outwash boulder cobble gravels can be seen over a width of 50 m to 60 m largely due to the placer mining and construction of settling ponds. This area is the south flank of the Shakwak Trench – Denali Fault zone. The west side of this section is bordered by deep moss/muskeg and scattered spruce and the slope rises from +5° to +20° opposite the helicopter pad and starts to form the west wall of Reed-Kelli Creek. Bordering the east side of the stripped virgin gravels and campsite the gradient is lower, in the order of +2° to +3°. The vegetation is muskeg with open spruce, and alder borders the stripped areas.

As shown on Map 2 the placer mining has transformed the valley bottom with stripped and sluiced tailings (Photo 1). From the campsite/helicopter pad area to the start of the Lower Canyon at an elevation of 987 m and over a distance of 450 m the stream gradient is +8°. The disturbed area at the campsite is 70 m wide and it narrows to less than 20 m at the start of the Lower Canyon. This section is bounded by rising valley walls from +10° to +15° at the camp to +30° at the start of the Lower Canyon.

Area 2

This area encompasses the Lower, Middle and Upper Canyon. At the northern end of the Lower Canyon the elevation is 990 m rising to 1,100 m at the southern end of the Upper Canyon over a distance of 1 kilometre. The stream gradient would be in the order of +10°. The canyons form a steep walled “V” shaped valley that has not been subject to glaciation. The west canyon wall is continuous rock outcrop 20 m to 50 m high with +30° to +50° slopes. From the top of the rock outcrop the valley wall rises at +15° to +25° with no rock exposure. The slope is covered by a thick organic (moss) mat with scattered spruce. Alder is common in the gullies. The east wall is also continuous rock outcrop but not as steep, in the order of +20° to +30° and is obscured by thick alders and deep organic/moss mat. The canyon bottom and stream channel is from a few metres to 20 metres wide. At least 50% of the stream flows over bedrock as the placer mining removed a lot of the material to form the base of the road along the west side of the canyon.

One of the most important features in the Lower Canyon is the “kink” in the stream channel caused by the major regional east-west trending Structure 1. The “kink” is observed in creeks both to the east and west of Reed-Kelli Creek and where it occurs it is associated with placer gold mineralization.

Structure 2 is the trace of a regional lineament defined by the tributary streams to the east and west of Reed-Kelli Creek. Its relation to the gold anomalous soil and silt values that occur in both sides of the creek is uncertain.



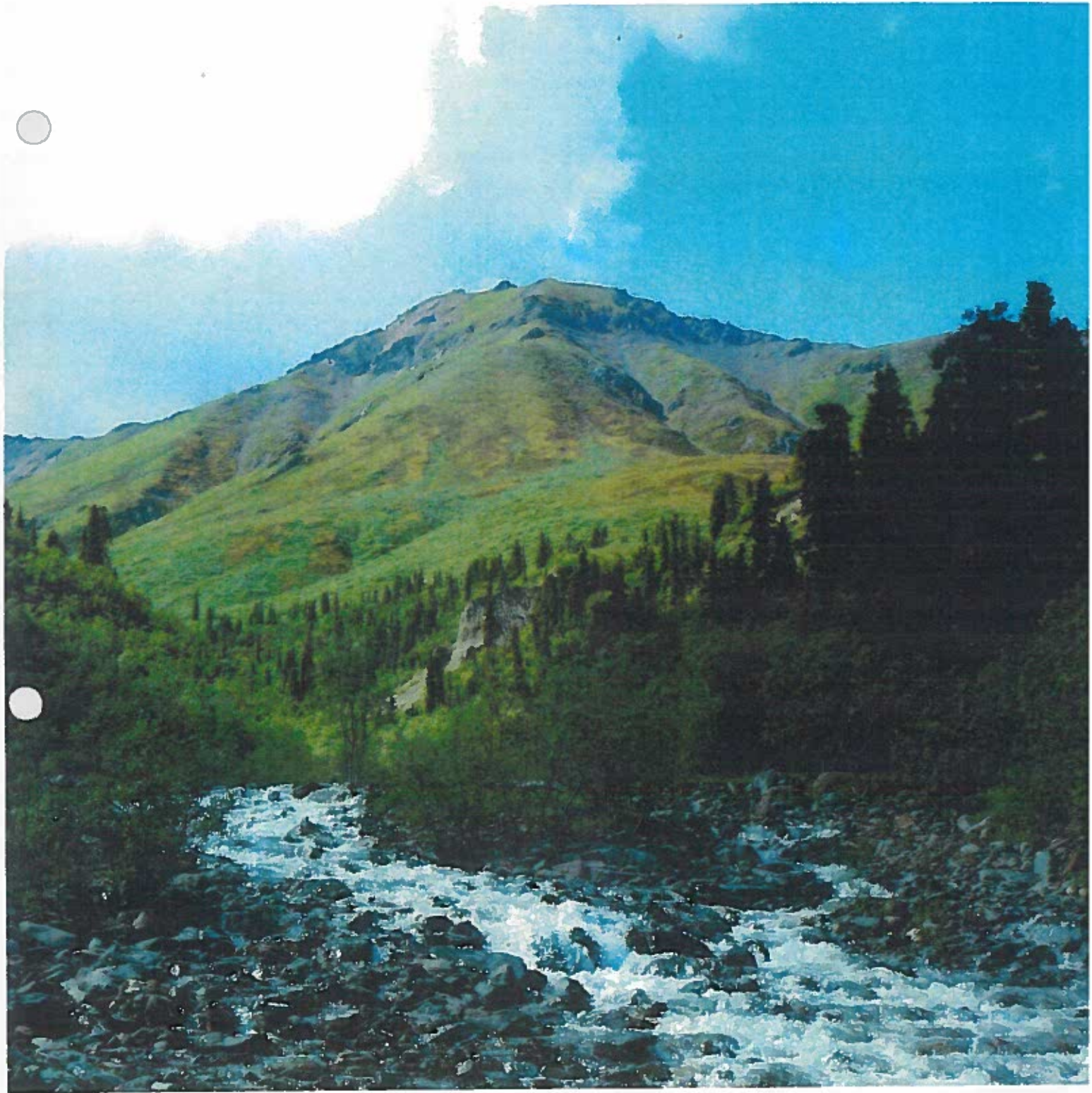
Area 1 mined looking southwest upstream to the start of the Lower Canyon



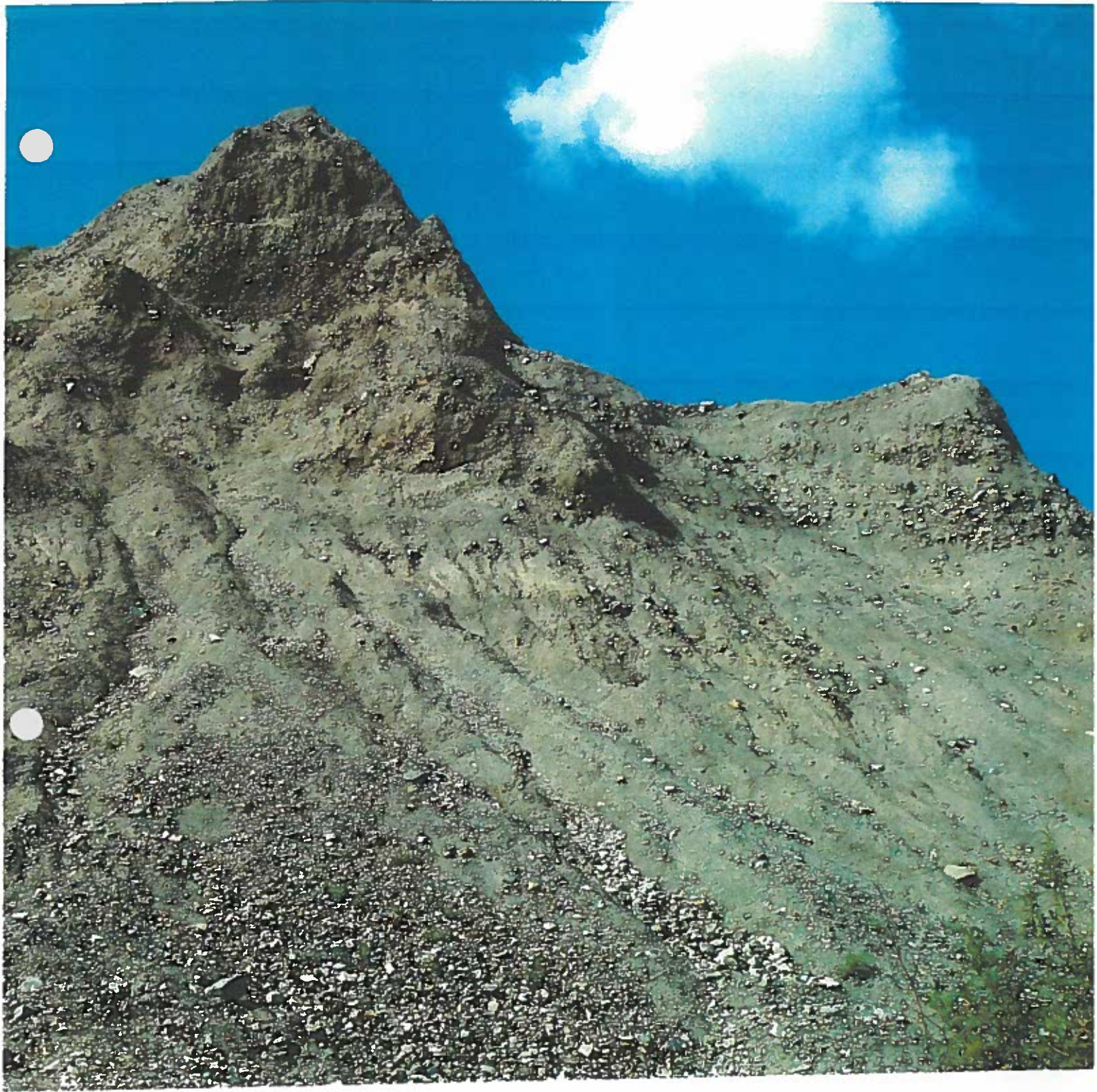
Large boulders where the creek has eroded placer tailings in Area 1



At the north end of Area 3 at location of Structure 2. Foreground is the road just before it crosses Reed-Kelli Creek and is obscured by thick alders.



Area 3 boulder cobble gravels in thawed channel looking at glacial outwash gravels at Forks



Poorly sorted glacial outwash gravels-till exposed in a 50 m high bank at the FORKS

Area 3

This area extends from Structure 2 upstream to the Forks a distance of 450 m. The Forks are at an elevation of 1,200 m with a stream gradient in the order of $+5^\circ$. This valley is much broader and open than Area 2 but it is still bounded by slopes from $+10^\circ$ to $+25^\circ$. Thick alder borders the creek giving way upslope to a deep organic/moss mat and scattered stunted black spruce. The 4,000 foot (1,200 m) contour marks the start of an alpine environment of willow and open grassland.

The stream channel meanders over a width of 30 m to 40 m of valley bottom and is composed of boulder cobble gravels that appear to be thawed. The sides of the channel are covered by alders and will be frozen. Scattered throughout the first 300 m to 400 m of stream channel are large round to elliptical smooth granite boulders up to 2 m in diameter that have been left behind by the retreating continental glaciation. These large boulders appear to start below an elevation of approximately 3,800 feet (1,160 m) and are scattered all the way down the Reed-Kelli Canyon as far as the campsite in Area 1.

There are two slides bordering this upstream channel. Slide 1 is on the west side of the valley upstream 100 m from Structure 2. The organic mat and spruce trees have slid down slope exposing a cobble glacial till. Slide 2 is on the east side of the valley midway upstream to the Forks. The slide is composed of surface organic mat and associated spruce trees and willows. The slide area is still black-frozen organic material but there is a large patch of volcanic ash at the top of the slide. No outcrop or glacial till was exposed by the slide.

At the Forks there is a large area of glacial outwash gravel derived from Cirque forming glaciers at higher elevation to the south. The glacial till gravels are exposed in a bank approximately 40 m to 50 m thick. The top of the bank would be at an approximate elevation of 4,100 feet (1,250 m). The top of Slide 1 is at an elevation of 3,775 feet (1,150 m). It is unknown as to the upper limit of the glacial till upslope from Slide 1 but it could very well extend to an elevation of 3,950 feet (1,200 m). It is probable that Area 3 was covered with a blanket of glacial till extending north and filling the canyon of Area 2 and the slopes to an elevation from 3,950 feet (1,200 m). These outpourings of gravels from the Cirque forming glaciers would have been dammed as they flowed northward to the Shakwak Trench which, during this period, was filled with ice flowing northwesterly.

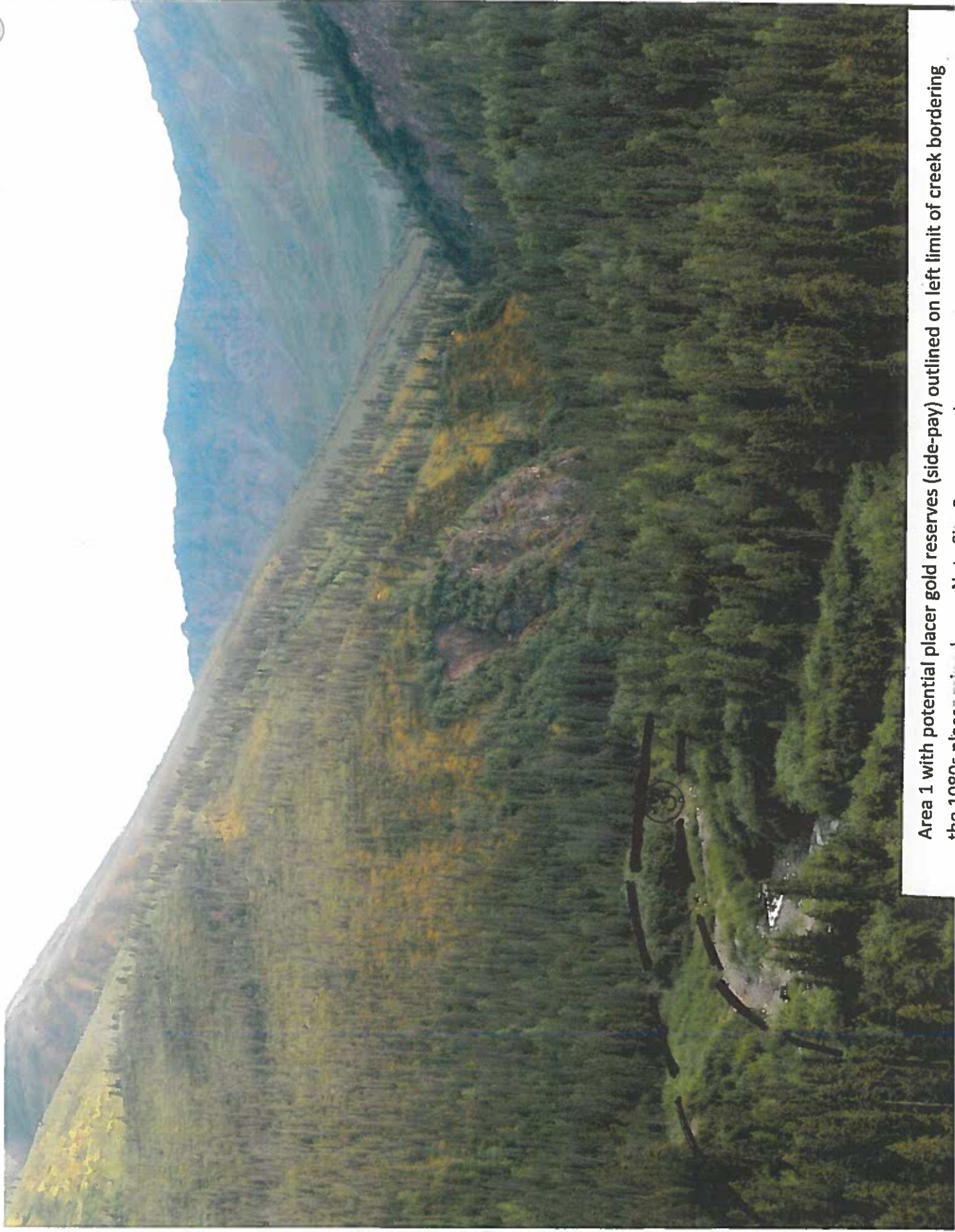
EVALUATION OF PLACER GOLD PRODUCTION AND EXTRAPOLATION OF GRADE (FINE OUNCES PER SQUARE FOOT)

The various periods of placer mining and estimated production is reviewed under History, page 3. The figure of 3,000 fine ounce. of total production will be used to extrapolate back to the grade mined. Fine ounces per square foot will be used since it is becoming a standard for many of the placer mines operating in the Yukon. It is easily converted to ounces per square yard or metre as well as to ounces per cubic yard or metre. In addition, the writer is familiar with reviewing the grade in ounces per square foot, the potential economics of a deposit.

The placer gold production is again broken into Area 1 and Area 2 (Map 1).



Area1 Outline of potential placer gold reserve (side-pay) on left limit bordering 1980s placer mined area to the east. Looking south, camp in trees and helicopter pad marked H.



Area 1 with potential placer gold reserves (side-pay) outlined on left limit of creek bordering

Area 1

The area mined is outlined from the mapping of the surficial features including exposed bedrock, tailing piles, stacked overburden, etc. as well as the margins of the mined 'cuts'. The mined area is shown extending to the north downstream from the helicopter pad 70 m.

The area of 1980s mechanized placer gold mining in Area 1 (Map 1) is calculated at 207,000 square feet (19,200 square metres).

The area of 1980s mechanized placer gold mining in Area 2 (Map 1) is calculated from the north end of the Lower Canyon and going south to the termination of mining upstream (south) in July 1986. In this canyon area there is little evidence of placer mining. The tailings from the sluice plant were used as road fill along the west canyon wall. Flash floods and winter "glaciation" have eroded the typical features of a placer mined area. The width of the mined area is really the width of bedrock in the stream channel.

Over 700 m (2,297 feet) of canyon length mined the width mined is estimated as 50 feet (15 m) giving an area mined of 115,000 square feet.

Total bedrock area mined in Area 1 and Area 2 is 322,000 square feet with a total fine gold recovered of 3,000 ounces. The grade of gold per square foot is 0.0103 oz/ft² (0.29 g/ft²).

Taking the present Canadian price for gold of \$1,500 per ounce the value is \$15.45 per square foot.

This very good grade per square foot would have been required to consider this deposit economic in the 1980s with the lower gold price during that period.

2014 PLACER EXPLORATION PROGRAM

Six sites were selected for Pan Sampling as shown on Map 2, 1:1000. This program falls within Area 1 as shown on Map 1, 1:2000.

The panning was carried out on site by the writer and Fred Erler. Sample collection was done by filling a standard size gold pan (14 inch diameter) with material from the sample site using a mattock and small shovel. Depending on the site the sample may first be caught in a tarp placed below the sample site and then transferred to the pan. The sample size was a "heaped" pan. The full pan was either transferred to a 5 gallon plastic bucket and carried to the site selected for washing the sample, or the sample was then transferred to a moveable plastic walled screen - 1/2 inch mesh set in a second 14 inch pan. Approximately one-half of the material would be transferred to the screen set in the pan. The pan and screen would then be immersed in the "washing pond" of quiet water constructed on the edge of the creek. The material would be wet screened and the oversize checked for nuggets. The second one-half of the sample would then be screened and the combined sample panned down to a "black sand" concentrate. The final step would be washing the black sand to one side so a colour count of the gold could be made. The estimated amount of black sand concentrate would be recorded as well as the number of gold colours. The final black sand concentrate



Fred Erler, master panner at north end of Lower Canyon



Bedrock interface with overlying gravels on the Left Limit , Site 2

along with the gold flakes would be washed into a small metal pan. All the concentrate was combined and dried at camp. The magnetic fraction was separated and placed in a separate container. The non-magnetic fraction placed in another container. Both were saved for future examination.

Site 1

This site is located in the Lower Canyon where Structure 1 crosses the creek. This is where the early 1900s mining was carried out on the east canyon walls. The mechanized 1980s mining is reported to have recovered outstanding gold values from this section as well as numerous nuggets.

Mr. Erler spent considerable time prying apart the friable-platy bedrock that would make a natural trap for gold migrating downstream. The five locations shown represent two pans per site. Only small amounts of black sand with the occasional trace colour were recovered. The 1980s mining had done a very good job of "cleaning" bedrock.

Site 2

This site extends along the northwest side of the creek (left limit) downstream from the Lower Canyon. It is the only area with good exposure of the bedrock-gravel interface. This interface is where placer gold would concentrate on the bedrock. The section was pan sampled in 2011, 2013 and extensively sampled in 2014.

Location

Sample 1	Pan 1, 3 trace	Pan 2, 1 trace
Sample 2	Pan 3, 1 trace	Pan 4, 1 trace
Sample 3	Pan 5, 1 trace	Pan 6, 3 trace
Sample 4	Pan 7, 1 trace	Pan 8, 1 trace
Sample 5	Pan 9, 5 trace	Pan 10, 6 trace
Sample 6	Pan 11, 1 trace	Pan 12, 1 trace
Sample 7	Pan 13, 1 trace	Pan 14, 1 trace

The black sand concentrate in all the pans was very fine grained magnetite with the occasional large pyrite cube

Site 3

This sample site is on the southeast side (right limit) of the creek channel. There is an intermittent bedrock-gravel contact over 30 m of poorly exposed, partially sluffed bank. The bedrock-gravel contact is the left limit edge of the 1980s mine cut.

Location

Sample 8	Pan 1, 1 #3, 1 trace	½ tsp. black sand
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This sample site is on the southeast side (right limit) of the creek channel. There is an intermittent bedrock-gravel contact over 30 m of poorly exposed, partially sluffed bank. The bedrock-gravel contact is the left limit edge of the 1980s mine cut.

Location		
Sample 8	Pan 1, 1 #3, 1 trace	½ tsp. black sand
<u>Sample 9</u>	Pan 1, 3 #3, 3 trace	1 tsp. black sand (good sample)
<u>Sample 10</u>	Pan 1, 4 #3, 4 trace	1 tsp. black sand (best sample)
Sample 11	Pan 1, 1 trace	
<u>Sample 12</u>	Pan 1, 10 trace	1 tsp. black sand (good sample)
Sample 13	Pan 1, 1 trace	
<u>Sample 14</u>	Pan 1, 3 #3, 3 trace	½ tsp. black sand
Sample 15	Pan 1, 1 trace	½ tsp. black sand
<u>Sample 16</u>	Pan 1, 2 #3, 2 trace	½ tsp. black sand
Sample 17	Pan 1, 1 trace	½ tsp. black sand
Sample 18	Pan 1, #3, 3 trace	½ tsp. black sand
Sample 19	Pan 1, 1 trace	minor black sand (poor)
Sample 20	Pan 1, 1 #3, 3 trace	½ tsp. black sand

(Sample 20 was dug out of the bedding plane fractures)

The panning of the bedrock-gravel contact represented by Samples 9, 10, 12, 14 and 16 demonstrated that this area (right limit) had a much higher number of fine gold particles and more black sand concentrate than the samples on the left limit, Site 2.

Site 4

Four pans were taken from the bank of a 2013 bulldozer trench. This trench cut into the right limit edge of the 1980s mine cut but could not reach the bedrock-gravel contact. Samples are from sluffed gravels.

Location		
Sample 1	Pan 1, 1 trace	minor black sand concentrate
Sample 2	Pan 1, 2 trace	minor black sand concentrate
Sample 3	Pan 1, 0	minor black sand concentrate
Sample 4	Pan 1, 0	minor black sand concentrate

Site 5

Two pans were taken from the top of the outcrop area where it is in contact with overlying gravels but greatly disturbed by stripping over the top of the virgin gravels. This is not a good sample site.

Location		
Sample 1	Pan 1, 0	minor black sand concentrate
Sample 2	Pan 1, 0	minor black sand concentrate

Site 6

Five pans were taken from the 2013 bulldozer trench.

Location		
Sample 1	Pan 1, 1 trace	½ tsp. black sand concentrate
Sample 2	Pan 1, 0	minor black sand concentrate
Sample 3	Pan 1, 2 trace	minor black sand concentrate
Sample 4	Pan 1, 1 trace	minor black sand concentrate
Sample 5	Pan 1, 0	minor black sand concentrate

This trench exposed the bedrock geology and the panning confirmed that the 1980s mining did not leave any gold.

POTENTIAL TARGET AREAS FOR PLACER GOLD RESERVES

Area 1

On Map 1, Area 1 downstream to the north from the Lower Canyon an area on the right limit (east side) of the valley has been outlined for exploration. This is the area of 'right limit-side pay' that Darrel Duensing recommended as having reserve potential. The pan sampling at Sample Site 3 (May 2) indicated a marked improvement in the amount of black sand concentrate and gold colour count compared with the left limit Sample Site 2. It can be assumed that the gold content in this area will diminish going downstream. However, the centre of the stream channel was mined from the camp site/helicopter pad upstream to the Lower Canyon so there is a good probability of gold values at least to the start of the 1980s mining. Going downstream on the right limit from the camp is of unknown reserve potential. A section was bulldozer stripped in 2013 of the upper gravels and alders from the camp to the north end of the area outlined. It is expected that this area will be free of permafrost and could be bulk sampled by a backhoe and small screen sluice plant.

This area outlines a bedrock area of approximately 204,000 square feet (18,950 square metres).



Midway upstream in Area 3 looking south towards the Forks. Note large boulders in a smaller boulder cobble gravel. Area free of vegetation is expected to be thawed. Stream channel

Area 3

On May 1, Area 3 upstream from the Upper Canyon and Structure 2 an area has been outlined of virgin gravels of unknown reserves potential. This section was considered a low priority area for both hard rock and placer potential when first mapped in 2011. However, subsequent review of the Larry Tremblay papers and discussions with Jean Pautler, the geologist who examined the Quartz claims in 2003 plus 2014 sampling has indicated that there are copper and gold mineralized outcrops and gold anomalous soil and silt samples in Area 3. In addition, 2011 exploration on the Vault claims to the south but within the Reed-Kelli Creek drainage located anomalous gold and copper values.

At the Forks, at the south end of the Kelli Placer Group there is a thick section of glacial outcrop gravels. There is no evidence that Area 3 or the Reed-Kelli Creek Valley was scoured by glaciations but instead were covered by glacial outwash gravels and till to an approximate elevation of 3,900 feet (1,188 m). The subsequent erosion of these glacial gravels and mineralized outcrops could very well have led to a concentration of placer gold on bedrock in the present stream channel.

There is no evidence of early placer exploration of the stream gravels. There is a very good possibility that the stream gravels are thawed making it difficult to sink shafts, even in the winter. In addition, the stream gravels have a very large component of large round boulders making shaft sinking very problematic.

The area could be explored by a backhoe with a small grizzly-screen-sluice plant and a good sized pump to keep the backhoe pit dry. The road from the camp through the canyons can be easily re-opened by a backhoe.

The upstream south target area for placer gold reserves (Map 1) outlines approximately 405,000 square feet (37,633 square metres).

CONCLUSIONS AND RECOMMENDATIONS

The placer gold potential is limited to the exploration areas outlined in Area 1 and Area 3, Map 1.

The downstream area of potential "side-pay" on the right limit is adjacent to the section of the valley that was mined in the 1980s. The pan sampling along the edge of the mine cut at Site 3 recovered a better concentration of fine placer gold and black sands than Site 2 on the left limit. Site 3 could easily be tested with a backhoe to expose thawed sections along the edge of the mined area and sampled with a grizzly-screen-slucce plant. The potential reserves could support a small placer mining operation.

The upstream target of potential placer reserves in Area 3 is in a virgin area of stream gravels that have not been tested for placer gold nor is there any evidence of historic placer mining. There is ample room for an exploration program using a backhoe to dig pits with the material being processed in a small grizzly-screen-slucce plant. A pump would be required to dewater the backhoe pits. There would be no need to strip vegetation during the first phase of exploration.

In both Area 1 and Area 3 there should be no problem in complying with environmental regulations.

Respectfully submitted,



Gordon G. Gutrath, B.Sc., P.Eng.

REFERENCES

Bremner, T. 1991, *Reed Creek, INAC, 1991, Yukon Exploration 1990*, p. 60-64

Dodds, C.I. and Campbell, R.B. 1992, Overview, legend and mineral deposit tabulations for *Geological Survey of Canada* Open files 2188, 2189, 2190 and 2191

Getsinger, J.S. 1998, *Preliminary Field Evaluation of the Kelli Property Area, Reed Creek, Y.T.* (unpublished)

Pautler, J., P.Geo. 2001, *Geological, Geochemical and Trenching Report on the Kelli Property* (unpublished)

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Tremblay, L. 1983 to 2007, Extensive reports, memos, maps, sampling data and photographs of geology related to mineralized zones (private collection)

Gutrath, G. 2012, *Geological Report Kelli Placer Group*, assessment work filing

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APPENDIX A
STATEMENT OF QUALIFICATIONS

ENGINEER'S CERTIFICATE

I, GORDON GUTRATH, of 702 – 181 Athlete's Way in the city of Vancouver in the Province of British Columbia, DO HEREBY CERTIFY:-

1. That I am a geologist with a business address of 702 – 181 Athlete's Way, Vancouver BC V5Y 0E5
2. That I am a graduate of the University of British Columbia where I obtained by B.Sc., in geological science in 1960.
3. That I am a Registered Professional Engineer in the Geological Section of the Association of Professional Engineers in the Province of British Columbia
4. That I have practiced my profession as a geologist for the past fifty-five years.

DATED at the city of Vancouver, Province of British Columbia, this 18th day of February, 2015.



Gordon G. Gutrath, B.Sc., P.Eng.

APPENDIX B

COST OF 2014 EXPLORATION PROGRAM

**August - September 2014 Exploration Program
 Surficial Geology, Placer Gold Evaluation
 Geological Mapping and Sampling
 Geotechnical Soil and Silt Sampling Program**

Field Work

Transportation:

Mobilization and Demobilization Whitehorse to Kelli Claim Group, Reed Creek

1 Ford 250 4 x 4 and trailer	\$ 750.00	
1 Jeep 4 x 4 and trailer	500.00	
		\$ 1,250.00

Transportation of fuel and fuel supplier from Alaska Highway to Kelli Claim Group

1 Argo - 8 wheeler		
Mobilization August 13 - 14	\$200.00	
Driver	150.00	
		350.00
Demobilization August 15 - 16	200.00	
Driver	150.00	
		350.00

Mobilization and demobilization from Alaska Highway to Kelli Claim Group and on-site transportation

2 ATV's August 13 - 28: 16 days @ \$80 / day	1,280.00
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Field Equipment:

Power saw, 2 sets soil augers, kraft paper geochemical sample bags, rock sample bags, grubhoes, pans, screens, flagging, Garmin GPS, satellite phone

August 13 - 28: 16 days @ \$50 / day	800.00
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Camp Costs:

Trailer (70' x 14') on site, Mrs. Louis Bouvier, Destruction Bay

August 13 - 28: 16 days @ \$30 / day	480.00
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Food

August 13 - 28: 16 days @ \$50 / day	800.00
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Geological Mapping

Outcrop and surficial geology; soil and silt sampling; supervision G. Gutrath, Geologist, P.Eng.

August 13 - 28: 16 days @ \$600 / day	9,600.00
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Labour/technician re: soil, silt and pan sampling

August 13 - 28: 16 days @ \$200 / day	3,200.00
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**August - September 2014 Exploration Program
Surficial Geology, Placer Gold Evaluation
Geological Mapping and Sampling
Geotechnical Soil and Silt Sampling Program**

Sample Analysis (September, 2014) Acme Labs		
Soil and silt sample analysis	2,262.33	
Rock analysis	<u>456.02</u>	
		2,718.35
Map Preparation: UTM Plots (September, 2104)		
Scale 1:3,000		
Underhill Geomatics, Whitehorse		569.63
Data compilation and report		
G. Gutrath, Geologist, P.Eng.		
Map preparation, drafting and printing		<u>3,000.00</u>
Total Costs		<u><u>\$ 24,397.98</u></u>

**August - September 2014 Exploration Program
 Surficial Geology, Placer Gold Evaluation
 Geological Mapping and Sampling
 Geotechnical Soil and Silt Sampling Program**

Division of Costs Into Two Exploration Programs

- 1) Evaluation of placer gold potential, surficial geology and pan sampling. Field work August 13 to 19, 2014
 Seven field days allocated to evaluation of placer gold potential
- 2) Geological mapping, geochemical soil and silt sampling. Field work August 20 to August 28, 2014
 Total cost field work for period August 13 to August 28
 (16 days) \$18,010
- 1) Exploration program on the Kelli Quartz Claim Group of 72 claims
 (Grouping Certificate No. HW07194)
 and the
- 2) Placer Claim of 21 claims (Grouping Certificate No. GW01054)
 Whitehorse Mining Division, Claim Sheet 115G12

Total cost of field work for both Quartz and Placer claims evaluation for the period August 13 to August 28 (16 days) is \$18,010 or \$1,125 per day

1) **Seven day field program**

<u>Evaluation of placer gold potential, surficial geology and pan sampling</u> costs allocated to placer claim evaluation for period August 13 to 19, 2014 is 7 days at \$1,125 / day	\$ 7,875.00
G. Gutrath, Geologist, P.Eng. Data compilation and report	1,500.00
Total Costs	<u><u>\$ 9,375.00</u></u>

2) **Nine day field program:**

Geological mapping, geochemical soil and silt sampling. Costs allocated to field work August 20 to August 28, 2014 is 9 days at \$1,125 / day	\$ 10,125.00
Acme Labs sample analysis September, 2014:	
Soil and silt sampling	\$ 2,262.33
Rock analysis	<u>456.02</u>
	2,718.35
Map preparation - GPS/UTM Plats Scale 1:3000 September, 2014. Underhill Geomatics, Whitehorse, YT	569.63
Data compilation and report	3,000.00
	<u><u>\$ 16,412.98</u></u>

APPENDIX C

LIST OF CLAIMS, EXPIRY DATES AND OWNERS

Claim Status Report

17 February 2015

Claim Name and Nbr.	Grant No.	Expiry Date	Registered Owner	% Owned	Excess NTS #'s	Grouping	Permit
R KELLY 1 - 4	P 26618 - P 26621	2019/01/01	Kristy Roberts Terry Pflleghaar	50.00	1 115G12	GW01054	
R KELLY 5 - 9	P 26622 - P 26626	2019/01/01	Kristy Roberts Terry Pflleghaar	50.00	0 115G12	GW01054	
R KRISTY 1 - 3	P 22984 - P 22986	2020/01/01	Terry Pflleghaar John A. Gartner	75.00	3 115G12	GW01054	
R KRISTY 4 - 8	P 22987 - P 22991	2019/01/01	Terry Pflleghaar John A. Gartner	75.00	3 115G12	GW01054	
R TERRY 1	P 23369	2020/01/01	Terry Pflleghaar John A. Gartner	75.00	3 115G12	GW01054	
R TERRY 2 - 3	P 23611 - P 23612	2019/01/01	Terry Pflleghaar John A. Gartner	75.00	3 115G12	GW01054	
R TERRY 4	P 25671	2019/01/01	Terry Pflleghaar John A. Gartner	75.00	3 115G12	GW01054	

Criteria(s) used for search:

CLAIM DISTRICT: 1000004 CLAIM STATUS: ACTIVE & PENDING DOCUMENT NUMBER: GW01054 REGULATION TYPE: PLACER

Left column indicator legend:

- R - Indicates the claim is on one or more pending renewal(s)
- P - Indicates the claim is pending.

Right column indicator legend:

- L - Indicates the Quartz Lease.
- F - Indicates Full Quartz fraction (25+ acres)
- P - Indicates Partial Quartz fraction (<25 acres)

- D - Indicates Placer Discovery
- C - Indicates Placer Codiscovery
- B - Indicates Placer Fraction

Total claims selected : 21