



# *The Klwane Project II*

YMIP 11-051 Final Report

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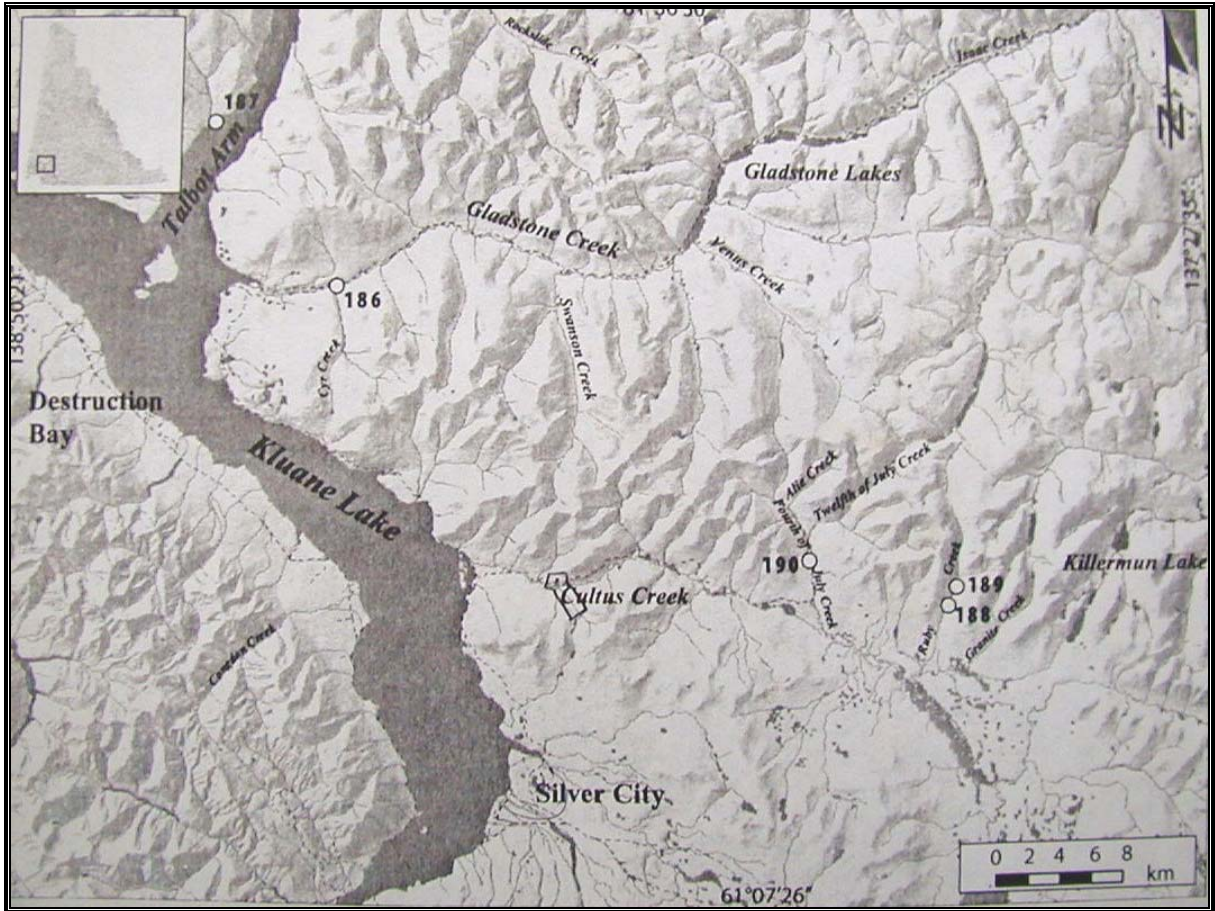
**Front Cover:** Cultus Creek right limit below the target Gulch.

## Project Rationale

Several key factors were considered in the selection of the Kluane Project II grassroots placer program. A brief, point form outline of these factors is given as follows...

:

1. The relatively “unexplored” nature of the region
2. The presence of rich placer ground in the nearby vicinity
3. A bedrock type of predominantly Kluane Schist
4. Ease of access, and
5. GSC Summary Reports: *The Kluane Mining District 1904* by R.G. McConnell, and *Exploration in Southwestern Yukon, 1914* by D.D. Cairns. A quote from the latter report states “*On Cultus Creek some prospecting has been done, and on an un-named tributary joining that stream on it’s left bank, gold is reported to have been found in encouraging amounts.*”



**Map 1: Shows the target location of Kluane Project II: a 6 claim block on Cultus Creek left limit tributary and 2 claims on Cultus Creek. The white circles indicate active operations on nearby creeks (2011) – some have been major producers. Since the 1970’s Gladstone and Fourth of July Creeks alone have produced over 50,000 ounces of gold. Most of the named (and a few un-named) creeks have produced at least some gold in the past, including Printers Creek, the right limit tributary of Cultus Creek, located about 2 km downstream from the gulch.**

## Forward

The Kluane Project II is a continuation of Kluane Project (I) (YMIP 10-116 Grassroots Placer), carried out during the 2010 prospecting season. During this time 11 (3 – 8 ft.) holes and 2 small trenches were hand dug on the lower portion of the creek from which about 15mgs of gold was recovered from about 7 cubic feet of gravel<sup>1</sup>.

The goal of Kluane Project II (YMIP Grassroots Placer 11-051) was to further prospect (with hand tools) a small left limit tributary of Cultus Creek for the presence of placer gold deposits of economic value. This project was carried out intermittently between the months of June and October 2011 during which a total of 65 man-days were spent on the project divided between Dick McKenna, Henry Johnson and Dylan McGinty.

The first five days (10 man days) was spent putting up a 12'x16' pre-fabricated frame structure for the accommodation of workers and shuttling equipment and supplies to the claims. Although the cabin was still about a kilometer short of the main target zone<sup>2</sup>, it turned out to be a great improvement from the previous years tent camp located about five km westward at Cultus Bay. Improvements to the trail followed, including the repair of a few creek crossings and a re-routing to the much more level eastern bank.

The remainder of the season was spent digging holes and trenches, prospecting and hand bombing the sluice-box and associated equipment up to the target zone. Unfortunately, due to a late start in that regard, further delayed by water permit issues, the sluice box played little importance. Instead, about 100 pans from selected gravels were panned, on site and at the applicant's home upon the return.

Four holes of approximately 4 x 4 x 7 feet in dimension and three trenches of up to 25 feet long were hand excavated. In total, close to 50 cu/yds of material (turf, gravel, silt etc.) was removed, almost half coming from trench 5 which bottomed out at 9 feet. Bedrock however was not encountered in any of the holes or trenches. Reclamation was also carried out on three of the holes and one of the trenches.

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<sup>1</sup> A map of these holes is located in the Appendix of this report.

<sup>2</sup> It was hoped to put the structure on the target zone (or much closer) however the terrain and circumstances prevented that being accomplished.

## Description of Holes/Trenches

During the 2010 season the target zone was centered on the lower portion of the creek (from 550 to 1150 feet from the mouth). As bedrock had not been encountered in these holes it was decided to move further up the creek in an attempt to reach that goal. Thus, the target zone for the 2011 season was located between 2450 and 2600 foot levels<sup>3</sup>. Bedrock usually being closer to the surface in the upper reaches of a stream played a part in this choice, however additional factors such as a widening of the valley from about 50 feet to about 150 feet and a general reduction in the gradient played an important role. Another hole (Cultus Hole 1) was dug on Cultus Creek proper on the right bank about 300 feet below where the target stream enters. A detailed description of each of the holes is provided as follows...

### **Hole 12**

Dimensions: 4ft x 4ft x 7ft

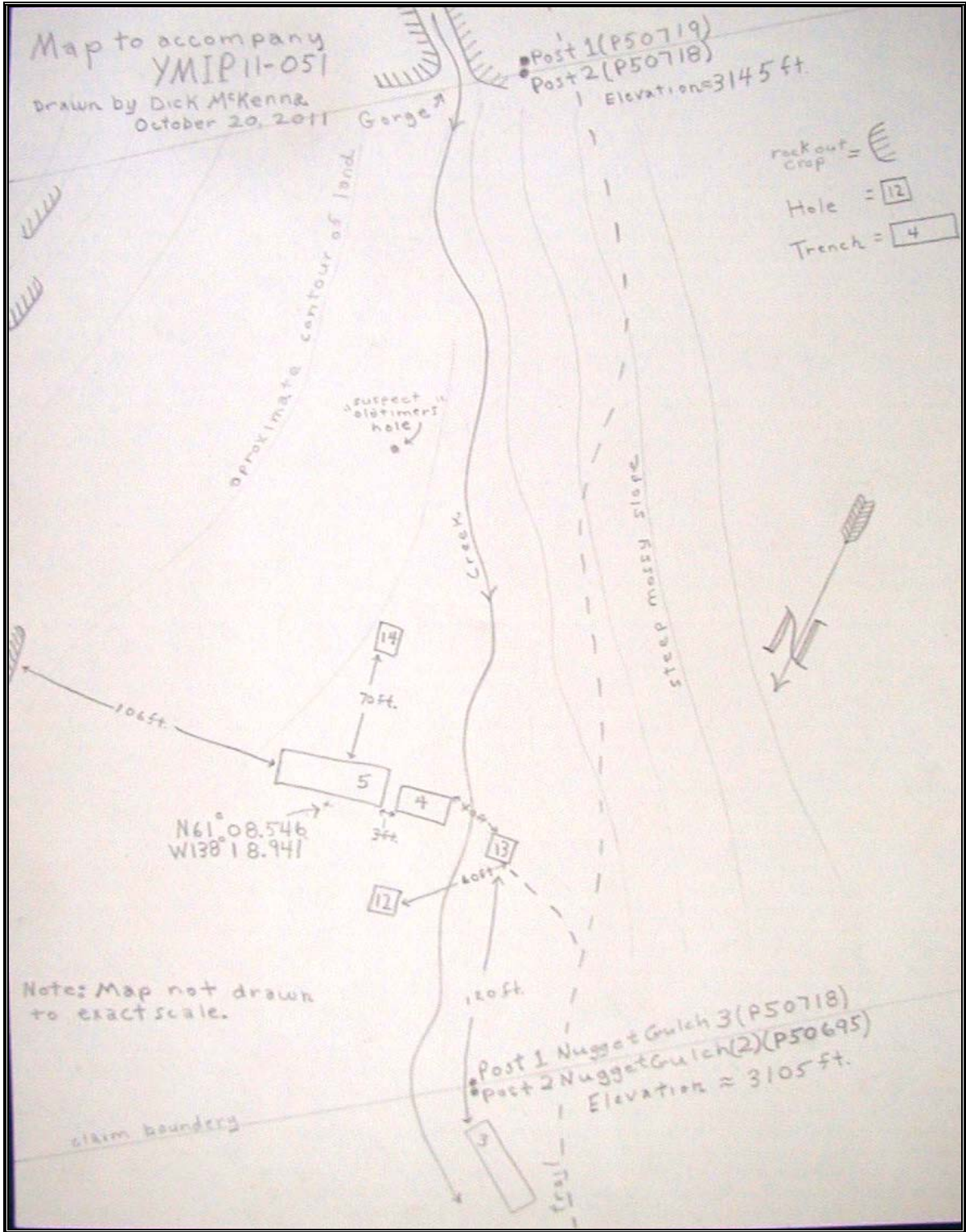
Comments: Soil and root for the first 3.5 ft. then large schist slabs to +/- 100 lbs.

Then coarse to fine gravel along with granodiorite rocks to +/- 100 lbs. Gophered to 8ft. and removed a 5-gallon sample.



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<sup>3</sup> In this report “level” refers to lateral feet from the mouth.



Map 2: Showing the location of holes and trenches hand dug on the Cultus Creek left limit tributary 2011. Post 2, Nugget Gulch 3 is located 2500 lateral feet from the mouth.

### **Hole 13**

Dimensions: 5ft x 4ft x 6ft

Comments: Soil and root for the first 4 ft. then mixed gravel with large rocks (schist and various) to +/- 50 lbs. Two large rocks (+/- 200 lbs) encountered at the bottom making further digging impossible. Took a 5-gallon sample from the bottom.



### **Hole 14**

Dimensions: 4ft x 4ft x 6.5 ft.

Comments: soil/silt for the first 4 feet then coarse to fine gravel to the bottom. A few large rocks +/- 150 lbs at bottom making further digging impossible. Due to this common obstacle it was decided that trenching would be more appropriate in order to gain depth. A 5-gallon sample was taken from the bottom.





### **Cultus Hole 1**

Dimensions: 3ft. x 3ft. x 3ft.

Comments: Located on Cultus Creek right limit approximately 300 feet below where the target stream enters. Gravel was encountered right away under the moss. Many rocks to +/- 20 lbs encountered - few schist rocks. Sample was taken from the bottom. Time limitations prevented this hole from being deepened further.



Note that this hole has subsequently been taken over by a squirrel to cache its winter's food supply.

### **Trench 3**

Dimensions: 5ft.x 25ft.x +/-1.5ft

Comments: Frozen to semi-frozen silt/clay encountered at once beneath the moss. About two feet was gained at each end by chipping with a pick however ice conditions seemed to get worse with depth. Gravel layer was not met thus a sample could not be taken.



### **Trench 4**

Dimensions: 6ft x 8ft x 5ft.

Comments: soil/silt/clay to 5 feet then gravel. Gophered to 6 feet and took a 5-gallon sample. This trench proved to be too close to the creek so it was discontinued and backfilled.



### **Reclaimed Trench 4**





### **Trench 5**

Dimensions: 20ft x 8ft x 9.5ft maximum.

Comments: This trench is located several feet towards the right bank from Trench 4. In order to obtain maximum depth with minimal sloughing (and the inherent danger) it was decided to increase the width and length of this trench upon the start. Interestingly, gravel was encountered at the far end (as shown in picture) almost at once (below 2 ft of soil and organics). At the opposite end however gravel was not encountered until about 5,5 feet - the material above being composed of silt and clay (with few rocks) along with quite a few decomposed logs (or roots?). Also, several areas of semi-frozen clay or silt were encountered but once the gravel layer was met frost was not a problem.

It was at this end where it was decided to go for maximum depth. Digging however proved to be exceedingly difficult due to the presence of many large rocks, several up to 3 to 4 hundred pounds apiece. Normally these boulders would have had forced the hole to be abandoned but with ample swinging room, most were broken down with a sledge

and removed. Fortunately most of the large boulders were schist, which are a lot easier to break than most of the other types (granodiorite being common). A few of the latter rocks that couldn't be broken down were pushed to the side and left for later removal (with a come-along).

About 4 feet was gained in this gravel, which took up a different character than usual in that much rusty quartz and decomposing schist was encountered especially towards the bottom. Pans were taken at each foot of depth without colors being seen until about two feet from the bottom upon which colors or flake turned up in almost every pan.

Plans are to return in 2012 and deepen this trench a few more feet. Before doing this however it should be widened (on the one side) and all of the remaining large rocks removed.



**Trench 5 at about 6 feet deep.** The large schist slab was subsequently broken down and removed. The three large boulders at top right were rolled into place with plans to remove by winching.



**Trench 5 at about 9.5 feet deep.** Actually, more like a pit at one end of the trench. Plans are to remove all the boulders and widen the pit in order to gain several more feet in depth.

## **Sluice Box Performance**

Over the winter of 2010 a sluice box was custom built for the project (by McKenna and Johnson). The cost, including materials and labor, amounted to close to \$2000. Reference materials used in the design included *Prospecting in British Columbia (1960)*, *Yukon Gold (1980)* and *The Placer Report (D.I.A.N.D 1990)*. The latter report proved most useful, with an in-depth study of sluice box design and performance. Specifications for the sluice box are in the Appendix of this report.

The sluice box and associated equipment was hand transported (in shuttles) the 1 km from the road to the target zone by the first week of August. A test run of 20 (5-gallon) pails was run through and a clean up was done. Four pans of concentrates produced 2

colors of gold, one flake of copper and very little black sand. This low recovery (especially with regard to the sand) indicated that some tweaking was definitely in order. Obligations in town however, further delayed by waiting time (10 days) for permission to use the creek, prevented this from being attempted until September. At this time another run of 50 pails (approx. 1 yard) was put through the box. During this run several angles were tried in order to minimize packing of the riffles (which had to be raked from time to time).

Cleanup produced about 50 lbs of concentrates (14 pans) from which 14 colors and 2 flakes were panned. Black sand was fairly abundant (about 6 ounces). As several pans of gravel strait from the hole produced a color apiece this recovery seemed suspiciously low too. Several pans of the tailings produced ample black sand but no colors.

With the end of the season drawing near, a dilemma was at hand, with two possible choices - a: should valuable time be spent learning the intricacies of the sluice box? Or b: Would that time be better spent gaining depth (in trench 5) and panning samples instead? Choice b was the decided course of action. Then, at least a relatively accurate comparative analysis could be gained against last years panning recovery. At the same time, valuable depth in trench 5 could be gained.



Derek Torgerson (YMIP) and Jeff Bond (Yukon Geology) check out the performance of the sluice box.

## Analysis (Panning Results)

One 5-gallon pail<sup>4</sup> of gravel was panned from each of holes 12,13,14,Cultus1 (hole1) and Trench 4. All of the gravel was taken from the bottom of the holes/trench. Two 5-gallon pails were panned from the bottom of Trench 5 (9 – 9 ½ ft depth). Also 6 pans were made of gravel between the 6 and 7-foot levels of Trench 5. About 1 cubic yard (50 pails 0.6 full) of the upper level gravels in the trench was run through the sluice box.

### Hole 12

Pan 1	2 colors
Pan 2	no visible color
Pan 3	1 color
Pan 4	2 colors
Pan 5	nvc
Pan 6	nvc
Pan 7	1 color, 1 flake
Pan 8	1 flake
Pan 9	nvc
Pan 10	1 color
TOTAL	7 colors, 2 flakes
Sample size:	0.8 cubic foot.
Depth	7-8 feet

### Hole 13

Pan 1	1 color
Pan 2	nvc
Pan 3	2 colors
Pan 4	1 flake
Pan 5	nvc
Pan 6	nvc
Pan 7	1 color
Pan 8	1 color
Pan 9	nvc
Pan 10	nvc
TOTAL	5 colors, 1 flake
Sample size:	0.8 cubic foot
Depth	6 – 6 ½ feet

### Hole 14

Pan 1	nvc
Pan 2	1 color
Pan 3	nvc
Pan 4	2 colors
Pan 5	1 flake
Pan 6	nvc
Pan 7	1 color
Pan 8	1 color
Pan 9	1 color
Pan 10	nvc
TOTAL	7 colors, 2 flakes
Sample size:	0.8 cubic foot
Depth	5 ½ - 6 feet

### Cultus 1, Hole 1

Pan 1	nvc
Pan 2	nvc
Pan 3	1 color, 1 flake
Pan 4	nvc
Pan 5	2 colors
Pan 6	nvc
Pan 7	nvc
Pan 8	1 color
Pan 9	nvc
Pan 10	1 color
TOTAL	5 colors, 1 flake
Sample size:	0.8 cubic foot
Depth	2 ½ - 3 feet

### Trench 4

Pan 1	nvc
Pan 2	nvc
Pan 3	1 color
Pan 4	nvc
Pan 5	nvc

### Trench 5

Pan 1	nvc
Pan 2	nvc
Pan 3	nvc
Pan 4	nvc
Pan 5	nvc

<sup>4</sup> According to Glover's Pocket Ref, one 5-gallon pail holds 0.8 cubic foot.

Pan 6 1 color  
 Pan 7 nvc  
 Pan 8 2 colors  
 Pan 9 nvc  
 Pan 10 nvc  
 TOTAL 4 colors  
 Sample size: 0.8 cubic foot  
 Depth 5 – 6 feet

**NOTE:** Flakes and colors as designated here is a relative term. A flake may range from 1 mm to about half that, an average color may be half that again, a small color could be up to 100 times smaller than a large flake

**TOTAL**  
**Sample size**  
 5.6 cubic feet

Pan 6 nvc  
 Pan 7 1 color  
 Pan 8 1 flake  
 Pan 9 2 colors  
 Pan 10 nvc  
 Pan 11 1 color  
 Pan 12 1 color, 1 flake  
 Pan 13 nvc  
 Pan 14 1 color  
 Pan 15 1 flake  
 Pan 16 nvc  
 Pan 17 nvc  
 Pan 18 2 colors  
 Pan 19 2 colors  
 Pan 20 1 flake  
 TOTAL 10 colors, 4 flakes  
 Sample size: 1.6 cubic feet  
 Depth pan 1 – 6 6 – 7 foot  
 pan 7 – 20 9 – 9 ½ foot

**TOTAL**  
**Recovery**  
 10 flakes, 38 colors  
 48 particles of gold

### **Results from YMIP 10 – 116**

**Hole 1**  
 TOTAL 5 flakes, 10 colors  
 Sample size: 1.2 cubic foot.  
 Pan 1-7: bottom, Pan 8-20: random selection.

**Hole 4**  
 TOTAL 2 flakes, 9 colors  
 Sample size: 1.2 cubic foot  
 Pan 1-20: Bottom.

**Hole 5**  
 TOTAL 2 flakes, 9 colors  
 Sample size: 1.2 cubic foot  
 Pan 1-20 bottom.

**Hole 6**  
 TOTAL 1 flake, 11 colors  
 Sample size: 1.2 cubic foot  
 Pan 1-7 bottom, Pan 8-20 random selection

**Hole 7**  
 TOTAL no visible color  
 Sample size 0.8 cubic foot  
 Pan 1-10 bottom.

**Hole 8**  
 TOTAL 2 flakes, 9 colors  
 Sample size: 1.2 cubic foot  
 1-7 bottom, Pan 8-20 random selection

**Hole 9**  
 TOTAL 4 flakes, 5 colors  
 Sample size: 1.5 cubic ft.  
 Pan 1-7 top, Pan 7-14 bottom, Pan 15-25  
 Random selection.

**Hole 10**  
 TOTAL 4 flakes, 10 colors  
 Sample size: 1.5 cubic ft.  
 Pan 1-7 top, Pan 7-14 bottom, Pan 15-25  
 Random selection.

**Hole 11**  
 TOTAL 2 flakes, 7 colors  
 Sample size: 1.2 cubic foot  
 Pan 1-7 bottom, Pan 8-20 Random selection

**TOTAL**  
**Sample size**  
 11 cubic feet  
**TOTAL**  
**Recovery**  
 22 flakes, 71 colors  
 93 particles of gold.



## **Observations & Findings**

### Gold Recovery

The total recovery from panning of samples from the 2010 holes produced 93 particles of gold (22 flakes, 71 colors). The total sample size was 11 cubic feet. The total recovery from panning of samples from the 2011 holes and trenches produced 48 particles of gold (10 flakes, 38 colors). The total sample size was 5.6 cubic feet, or about half of the 2010 sample size. From that, about half the amount of gold particles were recovered. Actually, the results from both seasons of panning are strikingly similar.

The best recovery from the 2011 panning occurred in Hole 12, 14 and Trench 5, all located on the right limit: Hole 12 at the 2600 level, Trench 5 at the 2665 level and Hole 14 at the 2730 level. Recovery for Hole 12 was 2 flakes, 7 colors from 0,8 cubic feet, Hole 14 was also 2 flakes and 7 colors from 0.8 cubic feet, and Trench 5 was 4 flakes, 10 colors from 1.6 cubic feet. Trench 4, also on the right limit, had 4 colors; Hole 13 on the left limit had 1 flake, 5 colors from 0.8 cubic feet and Cultus 1 Hole 1 recovered 1 flake, 5 colors from 0.8 cubic feet.

### Best Holes

The best holes of 2011 panning recovered slightly less gold then the best holes from 2010, however these holes scored higher then the remaining holes from 2010. Holes 12,14 and Trench 5 also scored higher then the average of the 2010 season, which is calculated as about 2 flakes and 6 ½ colors per cubic foot. And finally, although no colors were recovered from the top section of Trench 5, the bottom section produced the best overall results from both seasons of panning, calculated at 4 flakes, 10 colors per cubic foot (+/- 13 pans).

### Highest Concentration

Gold appears to be concentrated more densely then anywhere else tested (2010 and 2011), in the vicinity of Holes 12, 14 and Trench 5. Another observation, especially with regard to holes 12 and Trench 5 is that the gravels (at the bottom) are of a different

character and texture than the gravels encountered in the other holes. Its composition being characterized by a large amount of 8 to 12 inch cobbles (about 50% schist), a grainier texture, a rustier color, and an abundant amount of rusty quartz (and 1 to 2 inch chunks of limonite). It is of interest to note that some of the pay gravels encountered on Dominion Creek in the Klondike bare a similar resemblance<sup>5</sup>.

#### Size/Weight of Gold

The size of the gold flakes (from both seasons panning) range from about 0.5 mm to over 1 mm. The largest thus far recovered was 1.3 mm and came from the bottom of Trench 5. This flake is also wider than the norm of the rest. The flake is probably not what could be considered course gold, but close. The colors are small: from about 0.5 mm to half that or even less. Some were so small that recovery and handling presented a special challenge –several eluding recovery. The total weight of the gold recovered could not be determined<sup>6</sup> but it is probably very close to half of what was recovered from the 2010 panning (15mgs), or about 7.5 mgs.

#### Purity/Appearance of Gold

All of the gold colors and flakes recovered from the test holes show a very buttery yellow metallic shimmer, and are probably pretty pure. Gold recovered from nearby Fourth of July Creek averaged 850 fine. Most of the gold particles have the appearance of pure little flakes (with no stain) under the microscope. One however, appears in the shape of an oak leaf. All (from both seasons of panning) are identical in color, luster and hue etc.

#### Value Per yard

The sample size was 5.6 cubic feet. In order to calculate an “in the ground” estimate of the gold content per cubic yard, an expansion factor (of the gravel) will have to be considered. This is usually regarded as about 30%. Using this as a guide, 5.6 cubic feet of gravel above the ground equals about 4 cubic feet below ground. Thus, a calculated estimate of gold content per cubic yard is given as follows...

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<sup>5</sup> Discussion with Derek Thorgerson.

<sup>6</sup> A sensitive enough gold scale was unavailable.

$$27 / 4 = 6.75 \times 7.5 \text{ mgs} = \underline{50.625 \text{ mgs per cubic yard}}$$

Not exactly a bonanza. On the other hand, the cut-off grade for the dredges in the Klondike was about 60 mgs per cubic yard. It should also be remembered that the samples were taken from fairly superficial gravels, and no place from bedrock. Gold is nearly always concentrated on bedrock, or within the top several feet of bedrock itself. It is also usually the case that if gold is scattered in the superficial gravels it will also be concentrated on bedrock, especially if bedrock conditions are favorable<sup>7</sup>. Thus, it is probable that gold is concentrated on bedrock on the target stream. The question is, to what degree (and where)?

Unfortunately, there isn't a calculation that can determine the gold values on bedrock correlating to the gold values found in the superficial gravels, however R.G.McConnell's 1903 report on the gold values in the high level gravels<sup>8</sup> does shed some light on the subject: A 150-foot shaft was dug to bedrock and every 6 feet, samples were taken and panned. The conclusion was that the bottom six feet above bedrock contained about 100 times the gold as was found in the top 100 feet above bedrock. If a similar calculation were given to the 2011 panning results, there would be approximately 5 grams of gold per square yard of bedrock.

#### Additional Interesting "heavies" recovered

Upon examination of the concentrates with a 20-power microscope, some interesting finds were made. Copper, in the form of two small "wires" or "ribbons" and one (1.2 mm) piece that appears to be part nugget and part crystal. The latter piece is partially coated with a malachite patina. The former are a brilliant copper with perhaps a little red oxide staining. These pieces were recovered from Holes 12 and Trench 5.

Also, quite a few clear crystal fragments of an attractive raspberry red color were seen ranging in size up to 3 mm. As they are not really heavies, many (and even larger pieces) are probably lost before the concentrates are washed down. They are probably garnet. Whatever they are, they're attractive and show great clarity. A smaller, lavender

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<sup>7</sup> Schistose, decomposition, strike and dip etc.

<sup>8</sup> Page 220 GSC Mem 284 (Bostock Report).

colored crystal fragment was seen in the 2010 concentrates. Otherwise, for the most part, the heavies are composed largely of magnetite along with occasional small chunks of what appear to be Galena, Hematite, Ilmonite and Chalcopyrite.

Finally, a most interesting piece of unknown composition was recovered. It is about 3 mm across, is of a silvery (or chrome) color, has sort of a flowing form, and it appears to have striations on one side. Hmmm, it doesn't have the look of silver, although it could be. It doesn't look like a nugget or flake or a grain either. Possibilities include tungsten, or "tin", a telluride, or tenuously platinum. It is planned to have these pieces scrutinized by a trained geologist/gemologist with a high-powered microscope.

## **Additional Prospecting Activities**

(Rock exposures, permafrost, ground water conditions etc.)

During the course of the season as much time as possible was spent prospecting and traversing the gulch (and Cultus Creek near the gulch) getting a good grasp of the lay of the land and gathering other pertinent information. Special attention was taken of all exposures of outcrops and rim rock, groundwater and permafrost conditions, changes in grade, topography, vegetation, signs of old test pits etc.

As was the case last year, ground water was not encountered in any of the holes. This condition is very advantageous in that the holes slough less, no pumping is required, and digging is overall way more pleasant. Permafrost was nowhere encountered on the right bank, other than a small semi-frozen patch in Trench 5. Permafrost however seems to be a mainstay of the left bank (left limit going downstream), especially from about the 600-foot level upstream.

The topography of the left bank, especially in the target zone, does not seem advantageous for the accumulation of placers anyways. For one, it is too close to the creek and secondly it's a too great an angle. This is probably due to the dip of the

underlying bedrock, which becomes apparent when the gorge is met. This gorge, or canyon, appears suddenly about 400 feet upstream from the target zone. It's about 20 feet wide, 80 or 100 feet high and carries on for perhaps 300 feet at a steep angle whereupon the outcrops disappear and the creek again assumes a relatively level course. The elevation change in the gorge is about 150 feet in 300 lateral feet. The elevation change below the gorge is about 40 feet in 500.

After the gorge, rim rock again becomes scarce, but appears occasionally at a low level on the left limit. In future it would be a good idea to sink a few holes here, as bedrock could be close at hand. The right limit above the canyon was not traversed but rock outcroppings were seen in the higher levels at a few places.



**Figure 1. Entrance to the gorge. Notice the slope of the rim rock on the right (left limit). The rock outcrop on the opposite bank (just out of view at left) is much more vertical. Notice also the large quartz chunk (+/- 50 lbs). A large quartz vein (possibly its source) was located just under the moss at right.**

Special attention was made to search out rock outcrops on the right bank below the gorge and in the vicinity of the target zone --with fruitful results. At least three outcrops of rim rock were located (see map page 7): they are oriented to the vertical and dipping slightly to the north. It also appears that the rim rock may be benching here. The lowest place on the gulch where it has been spotted is about 100 feet towards the right bank from Trench 5. This location is probably the optimum place to dig a trench in future - between the outcrop and Trench 5.

All of the rock exposures on the gulch are of chlorite (?) schist, often with small to large quartz veins. Many chunks of schist and rusty quartz are found in the creek, in the holes and as slide rock. This rock, and the associated quartz veins, it is believed (for the most part) is the source of the gold in the gulch.



**Figure 2. Outcrops of rimrock exposed on the right bank several hundred feet below the gorge.**

**The suspect “old-timer’s hole”. Visiting geologists could not confirm or deny the supposition. Another shallow trench was found on Cultus Creek right limit near the cabin site.**

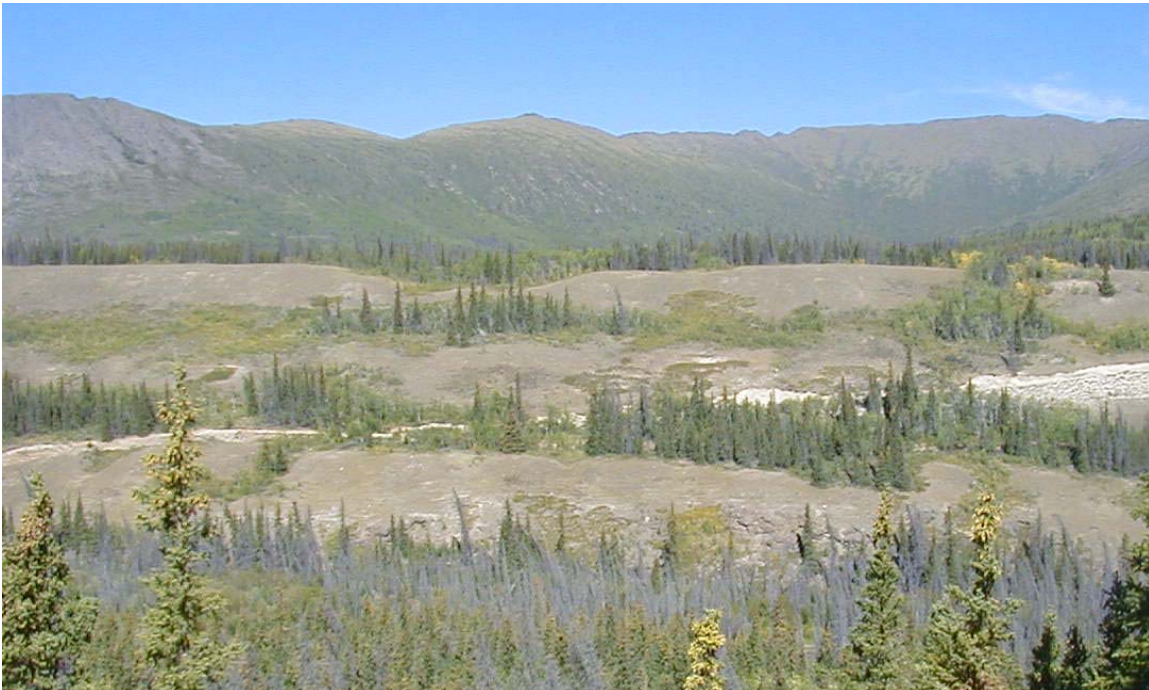


### Cultus Creek

Cultus Creek, near the mouth of the gulch has long been considered a potential target to investigate. Late in the year a shallow hole was dug and colors retrieved. It is believed however that the water table is close and any further digging would require the use of a pump. A more favorable target has been located in the form of a bench, or a series of benches, on the right limit of Cultus Creek. These are the only outcrops noticed on Cultus Creek so far traversed and are found on several levels for about 500 or more feet. A small one about thirty feet long (located just below where the gulch enters) seems to be a prime target. With fairly low overburden cover. it would probably take but a few days to hand trench it to bedrock. This is another prime target for next year.



**Figure 3. The small bench located on Cultus Creek right limit. It's about 30 feet long and located about 30 feet above the creek level.**



**Figure 4. A view of the Cultus Creek bench (schist outcrop) as seen from the right bank of the gulch. The smaller, lower bench is to the left and obscured by the trees. The road to Forth of July and Ruby Creeks is in the background.**



## Conclusions & Recommendations

### Conclusions

Looking back over the 2011 YMIP 11–051 prospecting season, a lot has been accomplished. First off, a comfortable, warm and safe accommodation has been erected on the claims. Such accommodation, not only provides workers with these essential needs, but it goes a long way in boosting morale and improving the quality of work being done. A sluice box (and associated equipment) was transported to, and set up on the target zone. Ample water is available and supplied through a 40-foot section of ducting, while a mossy depression serves as a tailings pond.<sup>9</sup> Unfortunately, due to time restraints and lack of experience however, the sluice was unable to adequately process the gravels it was intended to process (see sluice box below).

The holes and trenches dug, have for the most part, produced encouraging colors and flakes of gold, especially in the lower section of Trench 5, The possibility of a trend of gold concentration has also been revealed in this area (2600 level, right limit). Finally, surface prospecting has located a couple of new target locations: one just above the gorge and the other on the Cultus Creek bench.

### Recommendations

Recommendations are to continue prospecting the right limit 2600 level target zone by means of:

- 1) Deepening Trench 5 as far as feasibly possible (+/- 4ft?),
- 2) Digging a trench from the lower right limit outcrop towards Trench 5, and
- 3) Digging 2 or more additional trenches crosscutting the valley bottom in this area.

The sluice box is set up about 20 feet downstream from Trench 5 and thus is in a perfect position to work all of these gravels with the probability of one more move of about 20 feet towards the right bank.

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<sup>9</sup> As per the requirements for a class 4 stream.

Further recommendations are to trench the Cultus Creek (lower) bench as described previously and if time allows put in a trench upstream on the upper bench. Gravels from these locations can be panned or run through a smaller test sluice box (two 4-foot units already having been procured for this purpose). Several trench/holes should also be placed either on the right or left limit (to be determined) just above the gorge.

This plan, while focusing on one primary target zone, will also provide a wider knowledge of the gravels (and possibly bedrock conditions) of the creek as a whole. At the same time the required assessment work of these claims will be getting done.

Finally, in order to allow the above plan to be implemented, a 3 to 5 year mining plan and an application to use water<sup>10</sup> should be drawn up and submitted early in the new year.

### Sluice Box

The sluice box was designed using the latest in technology and materials. It will not however take rocket science to learn its intricacies. What it will take is a concentrated effort and a methodical approach. Several days should be allotted to this task. Various angles and water flow rates should be tried with clean-ups being done following each variation. Tailings should also be tested on an on-going basis. A new set of riffles of the Hungarian type should also be tried. Furthermore, several experienced placer miners should be consulted on the matter. This approach should provide a much better understanding of the intricacies of the sluice and of its positioning in order to obtain optimum recovery.

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<sup>10</sup> As required by the mining inspector and the water board.

## Selected Pictures from YMIP 11 - 051



Here is a view down Cultus Creek Valley towards Kluane Lake, located about 5 km eastward. In the foreground is where the tributary (target) creek enters Cultus Creek – both creeks are obscured by trees.

Here is a postcard view of Kluane Lake. Cultus Bay is in the foreground – Sheep Mountain, in the background.



Pictured here is the right bank (outcrop) of the gorge. Notice the slant of the ground at left (left limit). Bedrock is just below the moss and is dipping at about a 60-degree angle. All of the rock exposures seen on the right limit however are much more vertically inclined.



A portion of the sluicing equipment on the way up to the 2600 level of the gulch. The white structure is the hopper box frame. Dick hand bombed it here (650 level) whereupon Hank strapped it to a pack board and packed it the rest of the way

Rear view of sluice box and associated equipment. Water is supplied to the sluice through about 40 feet of galvanized ducting.



Front view of the sluice box. Affluent goes into a mossy depression. Tailings are shoveled to the left. The creek is located about 30 feet to the right.

The Gulch Munsters (crew) have a rest on the way up to the diggings (McGinty, Johnson, Johnson).



Cultus Cabin located just below the target gulch. Cost, using 80% recycled materials: less than \$1000. Sleeps 4 comfortably (6 in a bind).

Interior of Cultas Cabin.



## Appendix

### Cost of Goods & Services Purchased

Fuel (truck, saw, pump)	\$2,200 <sup>11</sup>
Food/Incidentals (64 man days x \$60 per)	\$ 3840
Tools/Equipment (wheelbarrow, batteries, gloves)	\$ 150
Cabin <sup>12</sup>	\$ 850
Sluice Box <sup>13</sup>	\$ 1100
Claim Staking & Assessment Fees	\$ 120
Wages - Henry Johnson (30 days @ \$300 per)	\$ 9000
Wages - Dylan McGinty (7 days @ \$150 per)	\$ 1050
Report Writing Costs	\$ 1500
TOTAL	<u>\$ 20,810</u>

YMIP Contribution \$ 14,300

Applicant Contribution \$ 6,510

**Note:** It is the policy of the Kluane Project to support local business and labor pools. A list of business's patronized include: Canadian Tire, SuperStore Gas, Kilrich Industries, Griffith's Sheet Metal, Canada Flooring, Super A Grocery, Cozy Corner and Madley's General Store (Haines Jtn.).

Both employees are local First Nations members: Mr. Johnson is Kluane First Nation and Mr. McGinty is Nacho Nyak Dunn First Nation.

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<sup>11</sup> Approximately 1960 liters (14 trips x 2 x 250 km)

<sup>12</sup> Cabin was built using about 80% recycled material (at no cost).

<sup>13</sup> See Sluice Box Specifications below

## Sluice Box Specifications

### Sluice Box

Material:	¾ inch plywood
Incidentals:	L-brackets, 2 ½" wood-screws, waterproof wood glue
Length:	16 feet (two 8-foot sections)
Width:	section 1: 20" (inside dimensions) section 2: 18"
Height:	9 inches
Matting	(1) 20" x 18" section of Nomad Matting (miner's moss) (2) 20" x 18" sections of Rolland Matting (2) 18" x 18" sections of Rolland Matting
Riffles	(2) 20" x 36" sections of expanded aluminum (1"x ½"openings) (2) 20" x 36" sections of expanded aluminum (1"x ½"openings) (1) 20" x 40" section of hardwood riffles (1 ¾ wide by ¾ inch height with 3-inch spacing.

### Hopper Box

Material:	¾ inch plywood
Length	24 inches
Width	24 inches
Height	40 inches
Grizzly	16"x16" expanded metal (1"x ½ " diamond openings)
Accessories	Plumbed with water sprinkler system (washer) 50 feet of 1 ¼ inch rubber hose with attachments (1) 1 ½ H.P. gasoline powered water-pump

**NOTE:** The above includes some very costly items. For instance the Nomad Matting (\$32 per sq. ft.), Rolland Matting (\$22 per sq. ft.), Expanded aluminum (\$180), Pump & Hose (\$420), Hardwood Riffles (\$110) etc.

## Distances and GPS Coordinates

### Distances:

Whitehorse to target location = 230km  
Whitehorse City limit (north) – Silver City Road = 203 km.  
Silver City Road – Cultus Bay road = 2.2 km. (on right)  
Cultus Bay road (start) – Ruby Road jnt. = 19.1 km.  
Ruby Road jnt, - Target location trailhead (on right) = 5.8 km.  
Trailhead to trench 3 (target zone) = approximately 2800 ft.

### GPS coordinates:

Trench 5: N 61 Deg. 08.546 Min. W 138 Deg. 18.941. Elev. 3100 ft.



**Map of target gulch** showing Cultus Cabin, Cultus Hole 1, Cultus bench and target zones for 2010 and 2011. The shaded area is the two new gulch claims (recorded but not yet on the map). The two Cultus Creek claims were also staked during the 2011 season. (NTS map115G01).



## Claims Staked

Four new claims were staked during the 2011 season (by McKenna, McGinty and Johnson). Two are on Cultus Creek above and below the target gulch, and cover the exposed bench previously described. The two new gulch claims are located above the gorge. Rimrock exposures low on the left bank suggest that bedrock here may be near. These claims bring to the program some very worthy potential targets. This (8) claim block now covers about 2km (7000 ft) of potential placer ground.

## Assessment work performed

During the 2010 season 14 years of assessment work<sup>14</sup> was carried out on target zone 1 (Nugget Gulch (!), while a total of 10 years assessment work was carried out on target zone 2 (P50695 and P50718). Plans are to group all, or a portion of the claims, in order to spread the work out evenly.

### **Cultus Creek Tributary**

<u>CLAIM</u>	<u>Work Performed</u>	<u>Work Filed</u>	<u>Good Until</u>
P50694	\$2820 (14 years)	14 yrs (9 yrs banked)	Sept. 2016
P50695	\$360 (1 year)	1 yr	Sept. 2012
P50718	\$950 (4yrs) (\$1000 <sup>15</sup> )	4 yrs	Sept. 2015
Nugget Gulch 4	0	--	Oct. 2012
Nugget Gulch 5	0	--	Oct. 2012
Nugget Gulch 6	0	--	Oct. 2012

### **Cultus Creek**

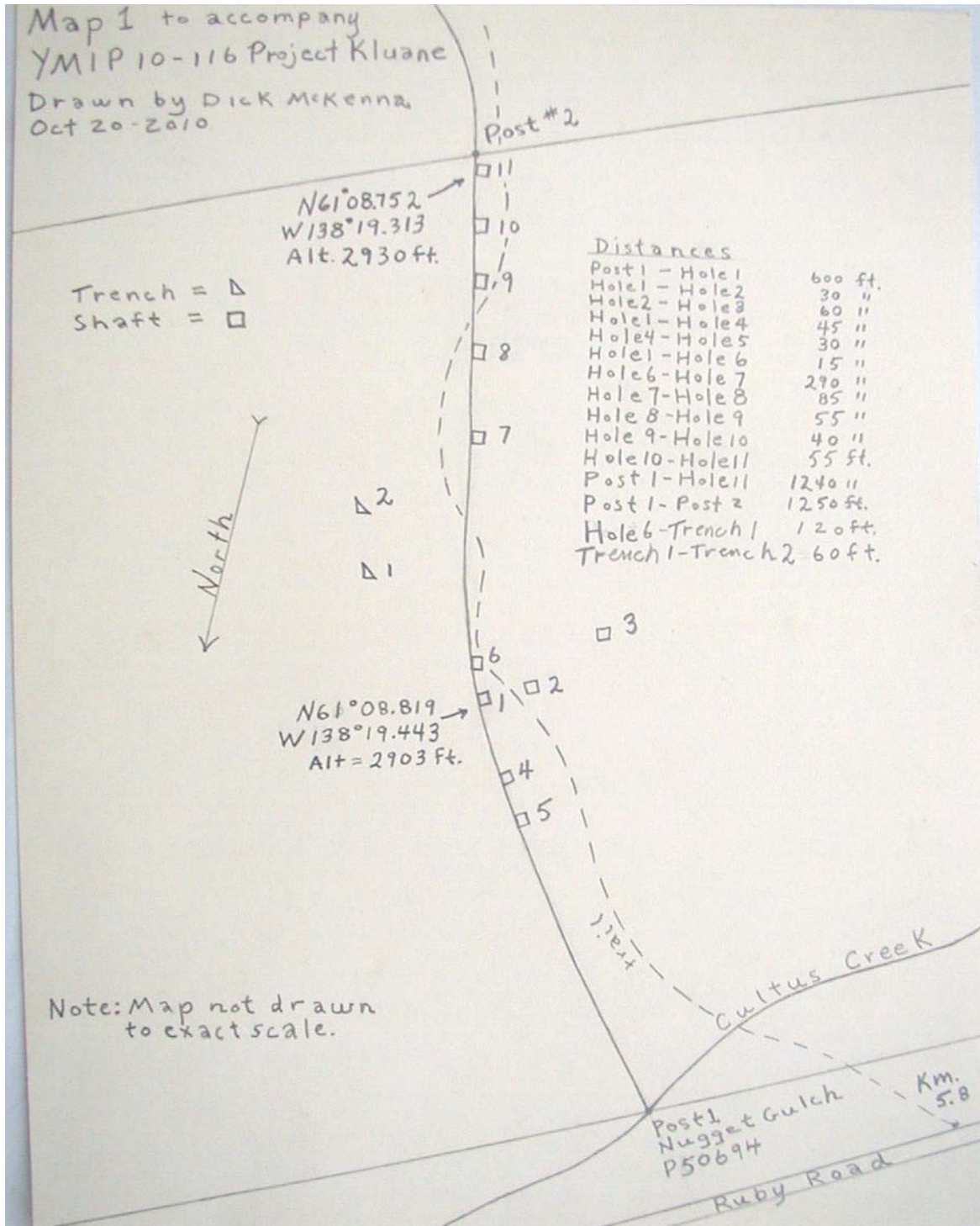
P509427	\$100	--	Sept. 2012
P509428	0	--	Sept. 2012

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<sup>14</sup> Trenching = \$40 per cubic yd. Shafting = \$100 for the first 6 ft. and \$100 each foot thereafter.

<sup>15</sup> \$1000 = 5 years yet to file.

Map of Holes for YMIP 10-116 (2010)



Map 3: Holes dug on target stream for YMIP 10-116 (2010).

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