

Work Summary for YMEP 22-016

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The first round of work on the Fire claims, a grouping of 17 placer claims, commenced April 1st to April 20th, 2022. The area worked and sampled was a left limit tributary of Brimstone Gulch, a left limit tributary of Sulphur Creek. Samples from this work were processed over the first 2 weeks of September 2022. The work in April involved continuing a shaft on the upstream border of claim Fire #10, P 521276, from 53ft deep to an end depth of 74ft. This shaft is located at UTM: Zone 07, V 0608319, 7071515.

Two layers of false gravels or bedrock were encountered, first at 20ft to the bottom of 22ft for a 3ft thick layer there and another layer from 39-44ft and intermittent patches of bedrock/gravels, along with 3 ancient bones found from 53-65ft. A layer of volcanic ash, 1" to 4" thick was at 53ft to 54ft. All the layers encountered above the pay gravels had the same constitution, mostly quartz, schist, and chlorites, same of the pay gravels but the rocks were limited to a smaller size. Pay gravels started at 66ft for a 4ft thick layer of gold bearing, colluvial white channel gravels. These gravels were predominantly angular quartz with some more rounded rocks, mostly schists, in the mixture. Every pan taken in April from these gravels had at least 10 fine angular colors, some of the gold was rounded though. Bedrock was encountered at 70ft. Three feet of decomposed muscovite feldspar quartz schist, light brown in appearance was encountered on top of a harder, less decomposed graphite chlorite quartz schist, silvery gray in appearance. Some of the quartz veining within the schists was up to 12" wide and heavies and gold continued to appear in the bedrock. Pyrite and hematite were noticed to be imbedded in some of the brown schist. There were bands of ice continuing down into the newly discovered grey bedrock before excavations were halted due to spring break up.

The dump piles were sluiced In September, by long tom sluice box and a small Honda pump, hauled in by ATV and foot for the final 1500ft. One yard of gravels was processed that produced 0.079g of fine gold with a few courser pieces as well. Less then one yard of bedrock, estimated 0.75 of a yard was processed for 0.006g of courser fine colors. Most of the gold is angular in appearance when viewed under a 16x hands lens. Due to the floor of the shaft V-ing in, not enough material was removed to not make a full cubic volume of bedrock, e.g. 3x3x3ft. This was due to the time diggings were halted due to the seasonal weather shift. The heavy concentration accumulated consisted majorly of brown pyrite, hematite, tourmaline, magnetite and smaller amounts of possible cinnabar and unknowns. All heavies, aside from the tourmaline were heavily oxidized brown.

When the sampling gear was being demobilized, workers took the other side of the creek down to their ATV, the opposite side of which they hiked the gear in. Piles of similar looking rocks were discovered by the creek edge, beside what could possibly be old timer tailings. These

findings were directly across from the shaft dug in April. The gravels located on bedrock could be more concentrated here, where the 'streak' is or they have possibly eroded down the hill from a bench located above the right limit of the tributary.

The next stage of work plans involved another shaft to be dug in the main creek valley, on the final most upstream mile of Brimstone Gulch, to be located on claim Fire #2, bordering with Schmidt Mining Corps. claim K #20, P 48204. A route was scouted and portions of trail were cleared to allow access. While traversing to claim Fire #2 old timer workings were discovered in two locations on the right limit side of the creek, on claims; K #15, P 46599 and K #4, P 46588.

Further examination at K #15 revealed that the old timers had dug right on the creek or the creek had taken the route after erosion took place. Odd formations that looked like piles under the water were noticed downstream of the shafts and dug up underwater to reveal quartz gravel tailings in the permafrost creek bed. The valley widens out here and there is a bowl like feature in the geography. The gold rush era mining recorder creek books show prolonged activity on left forks of Brimstone, so this could possibly be one of the producing sections of the gulch. This area was supposed to be staked to adjoin claim Fire #1, P 521139, as part of this YMEP program but it was not completed in time. On claim K #4 a shaft was discovered that was dug in the past 20- 30 years, judging from rubbish and abandoned equipment found at the site. A tailing pile was discovered here and dug up to reveal an angular quartz gravel as well.

The findings on claim K #15 and K #4 are of interest as Schmidt Mining had an auger drill program done in summer of 2021, with holes a few hundred feet away from both old shaft sites that had unearthed an interesting quartz gravel. These gravels are more rounded in appearance than the gold bearing gravels dug up at Fire #10 but nonetheless are the same in constitution and general appearance. The shaft dug in more recent years on Fire #10 revealed 2 layers of rocks above the pay gravels that consisted of the local bedrock for the most part. Verbal communications with Schmidt Mining revealed that their drill program yielded zero results due to the driller interpreting his findings as mud to bedrock. After finding evidence of the same gravels on a tributary of the main gulch and two sites on the main valley that had the same gravels unearthed then its safe to assume that the driller had encountered the same local stratigraphy that was recorded on Fire #10, being the layers of bedrock and angular gravel found above the pay gravels on bedrock.

The last area of interest discovered was just past the downstream border of Fire #2, where an old timer camp or garbage dump was found with piles of garbage and broken or abandoned gear such as multiple woodstoves. This is right at the mouth of the left fork at the top mile of the main gulch on the upstream end of claim K #20. While exploring further round rocks were found mixed into the piles of garbage. The rocks could not have come from far but the exact spot was not determined. There were signs of diggings in the creek bed. The amount and type of garbage shows prolonged activity and they must have been finding something to continue to finance all the gear and quality supplies. Plans were to dig a shaft close to here on Fire #2, but the work was not completed in time.

In conclusion to the findings of the 2022 YMEP on Brimstone, a summary of the evidence acquired shows good potential for the main valley of Brimstone Gulch to have a large deposit of gold bearing quartz channel gravels on claims K #1-20 owned by Schmidt Mining Corporation and Fire #2-9 owned by Montana Bailie and Kaitlyn Crichton. Possible higher grade concentrations of the gravels recently discovered on one of the tributaries flowing into the main valley could be drilled off now that knowledge of the stratigraphy is clearly known and a base depth for bedrock was discovered. The layers of rock encountered above the pay gravels in the 2022 shaft, along with the matching of historical gravel tailings in the main valley to the modern gravel tailings from the shaft on the left limit tributary explain why the drilling in the main valley was interpreted as mud to bedrock. Gravels were not discovered by the drilling so the two layers of slide rock must be in the valley as well if the gravel tailings match up over a distance apart but are located beside "mud-to-bedrock" drill hole lines.

The gravels encountered on Fire #10 provided evidence that there is a colluvial source of gold coming from the hillsides with remnants of an older placer channel mixed in. The gold recovered was angular with crystalline edges when viewed under a 16x hand lens, meaning it must have come from local rock sources. There were courser more traveled pieces of gold within the gravels as well, the mixture of course gold to course rocks and smooth gold to amount of rounded channel rocks in the gravel mixture seemed to match as a percentage. Estimated at 90% angular and 10% rounded for both the rocks and gold encountered.

The findings of the historical workings with gravel tailings, spread apart by thousand of feet all the way up the main valley shows the gravel deposit to continue from the mouth of Brimstone, over 2 miles to the upper ends. Now that the length is established, the width and pay grades of these gravels should be looked at more thoroughly to determine if Brimstone Gulch is a virgin to modern mining methods creek located on one of the richest creeks of the Klondike Gold Rush.

Picture descriptions running from top to bottom:

Bones found from 53-65ft, the shaft at 68ft deep, tailings from pay gravels encountered, long-tom sluice-box and bedrock pile to be sluiced, gold recovered from gravels on Fire #10, gravel tailings found on K #4, gravel tailings on K #15, heavies concentration from quartz gravels on Fire #10, pay gravels on bedrock in the shaft showing bedrock change, garbage dump on K #20 and round rocks found at the dump.













