

## **Final Report YMEP22-012**

### **SULPHUR CREEK**

#### **Placer Claims**

23 AD, 24 AD, 25 AD (00433,00429,32079)

Dan 1-8 (P 516241- P 516248), Discovery (P 508335), Frac (P 522140)

Sulphur 1-16 (P 09685- P 09700), Sulphur 20-28 (P 13551- P 13559)

Sulphur Gold 17 (P 11273), Sulphur Gold 18 (P 11297)

GROUPING GD 01753

**Report Written by D.C. Klippert**

Location of claim groups: 63°47'00"N; 138°55'00"W, and 63°45'00"N; 138°52'00"W  
NTS map sheet: 115O/15; 115O/10  
Mining District: Dawson  
Date: January 31, 2023

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## Introduction

The following is the final report for exploration work under grant YMEP22-012, on the Sulphur Creek placer claims owned by D.C. (Dan) Klippert.

## Location and Access

Sulphur Creek is a right limit tributary of the Indian River, located in central Yukon approximately 60 km by air south of Dawson City, Yukon (Figure 1). The property is accessible by road during the summer months by the following route: Dawson City to Hunker creek road via Klondike highway: 14.3 Km; Hunker creek road from Klondike highway to Sulphur creek road junction: 29.2 Km; Sulphur creek junction to North boundary of claim block: 8.6 Km. All roads are government maintained.

## Property Description

The Sulphur creek property consists of 40 placer claims staked under the Yukon placer mining act, and recorded at the Dawson Mining Recorder, Dawson Mining District. The 40-claim property is divided into two blocks, the "Upper Sulphur block" and "Lower Sulphur block". The centres of the claim groups are at 63°47'00"N; 138°55'00"W (Upper Sulphur Block), and 63°45'00"N; 138°52'00"W (Lower Sulphur Block), on NTS map sheets 1150/15 and 1150/10, in the Dawson Mining District (Figure 2).

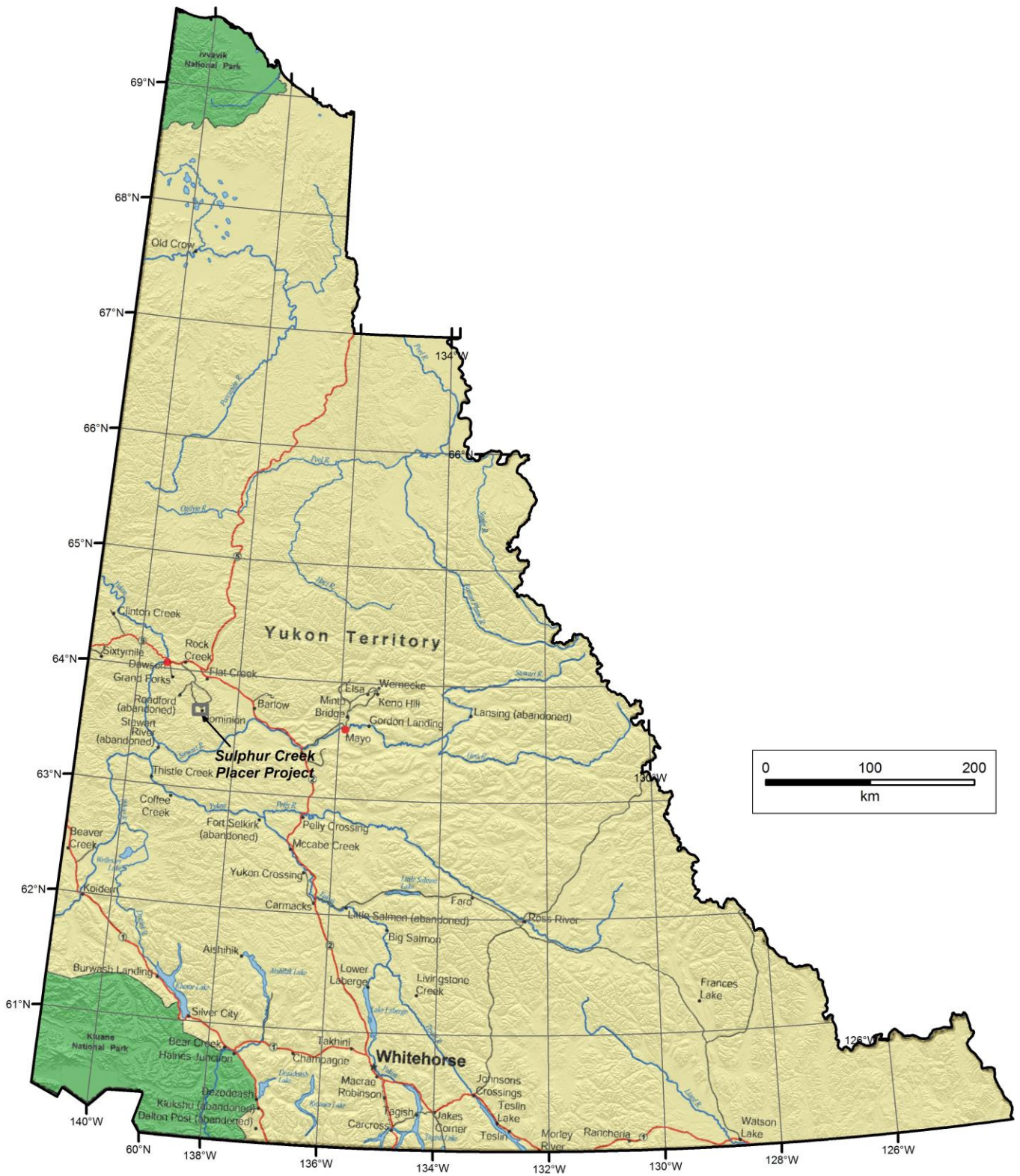


Figure 1 - General Location of Sulphur Creek Project, Yukon.

## Placer Tenure

Table 1 shows a summary of the current claim status for the Sulphur Creek property. These claims are all grouped under grouping GD01753.

Table 1 – Claim status, Sulphur Creek property.

### Claim Status report

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Claim status	Claim name and number	Grant number	Claim expiry date	Claim owner	NTS Map	Grouping number	Notification Approval	Total Excess Credit
Active	24 AD	00429	2023-10-11	Daniel Klippert - 100%	115O15c	GD01753	LP01368	53
Active	23 AD	00433	2023-10-11	Daniel Klippert - 100%	115O15c	GD01753	LP01368	58
Active	25 AD	32079	2023-10-11	Daniel Klippert - 100%	115O15c	GD01753	LP01368	53
Active	Sulphur 1	P 09685	2023-10-11	Daniel Klippert - 100%	115O15c	GD01753	LP01368	74
Active	Sulphur 2	P 09686	2023-10-11	Daniel Klippert - 100%	115O15c	GD01753	LP01368	74
Active	Sulphur 3	P 09687	2023-10-11	Daniel Klippert - 100%	115O15c	GD01753	LP01368	74
Active	Sulphur 4	P 09688	2023-10-11	Daniel Klippert - 100%	115O15c	GD01753	LP01368	74
Active	Sulphur 5	P 09689	2023-10-11	Daniel Klippert - 100%	115O15c	GD01753	LP01368	74
Active	Sulphur 6	P 09690	2023-10-11	Daniel Klippert - 100%	115O15c	GD01753	LP01368	74
Active	Sulphur 7	P 09691	2023-10-11	Daniel Klippert - 100%	115O15c	GD01753	LP01368	74
Active	Sulphur 8	P 09692	2023-10-11	Daniel Klippert - 100%	115O15c	GD01753	LP01368	74
Active	Sulphur 9	P 09693	2023-10-11	Daniel Klippert - 100%	115O15c	GD01753	LP01368	74
Active	Sulphur 10	P 09694	2023-10-11	Daniel Klippert - 100%	115O15c	GD01753	LP01368	74
Active	Sulphur 11	P 09695	2023-10-11	Daniel Klippert - 100%	115O15c	GD01753	LP01368	74
Active	Sulphur 12	P 09696	2023-10-11	Daniel Klippert - 100%	115O15c	GD01753	LP01368	74
Active	Sulphur 13	P 09697	2023-10-11	Daniel Klippert - 100%	115O15c	GD01753	LP01368	74
Active	Sulphur 14	P 09698	2023-10-11	Daniel Klippert - 100%	115O15c	GD01753	LP01368	74
Active	Sulphur 15	P 09699	2023-10-11	Daniel Klippert - 100%	115O15c	GD01753	LP01368	79
Active	Sulphur 16	P 09700	2023-10-11	Daniel Klippert - 100%	115O15c	GD01753	LP01368	79
Active	Sulphur Gold 17	P 11273	2023-10-11	Daniel Klippert - 100%	115O15c	GD01753	LP01368	74
Active	Sulphur Gold 18	P 11297	2023-10-11	Daniel Klippert - 100%	115O15c	GD01753	LP01368	74
Active	Sulphur 20	P 13551	2023-10-11	Daniel Klippert - 100%	115O10i	GD01753	LP01368	68
Active	Sulphur 21	P 13552	2023-10-11	Daniel Klippert - 100%	115O10i	GD01753	LP01368	68
Active	Sulphur 22	P 13553	2023-10-11	Daniel Klippert - 100%	115O10i	GD01753	LP01368	68
Active	Sulphur 23	P 13554	2023-10-11	Daniel Klippert - 100%	115O10i	GD01753	LP01368	68
Active	Sulphur 24	P 13555	2023-10-11	Daniel Klippert - 100%	115O10i	GD01753	LP01368	67
Active	Sulphur 25	P 13556	2023-10-11	Daniel Klippert - 100%	115O10i	GD01753	LP01368	67
Active	Sulphur 26	P 13557	2023-10-11	Daniel Klippert - 100%	115O10i	GD01753	LP01368	67
Active	Sulphur 27	P 13558	2023-10-11	Daniel Klippert - 100%	115O15c	GD01753	LP01368	67
Active	Sulphur 28	P 13559	2023-10-11	Daniel Klippert - 100%	115O15c	GD01753	LP01368	67
Active	Discovery	P 508335	2023-10-11	Daniel Klippert - 100%	115O15c	GD01753	LP01368	7
Active	Dan 1	P 516241	2023-10-11	Daniel Klippert - 100%	115O15c	GD01753	LP01368	7
Active	Dan 2	P 516242	2023-10-11	Daniel Klippert - 100%	115O15c	GD01753	LP01368	7
Active	Dan 3	P 516243	2023-10-11	Daniel Klippert - 100%	115O15c	GD01753	LP01368	7
Active	Dan 4	P 516244	2023-10-11	Daniel Klippert - 100%	115O15c	GD01753	LP01368	7
Active	Dan 5	P 516245	2023-10-11	Daniel Klippert - 100%	115O15c	GD01753	LP01368	7
Active	Dan 6	P 516246	2023-10-11	Daniel Klippert - 100%	115O15c	GD01753	LP01368	7
Active	Dan 7	P 516247	2023-10-11	Daniel Klippert - 100%	115O15c	GD01753	LP01368	7
Active	Dan 8	P 516248	2023-10-11	Daniel Klippert - 100%	115O15c	GD01753	LP01368	7

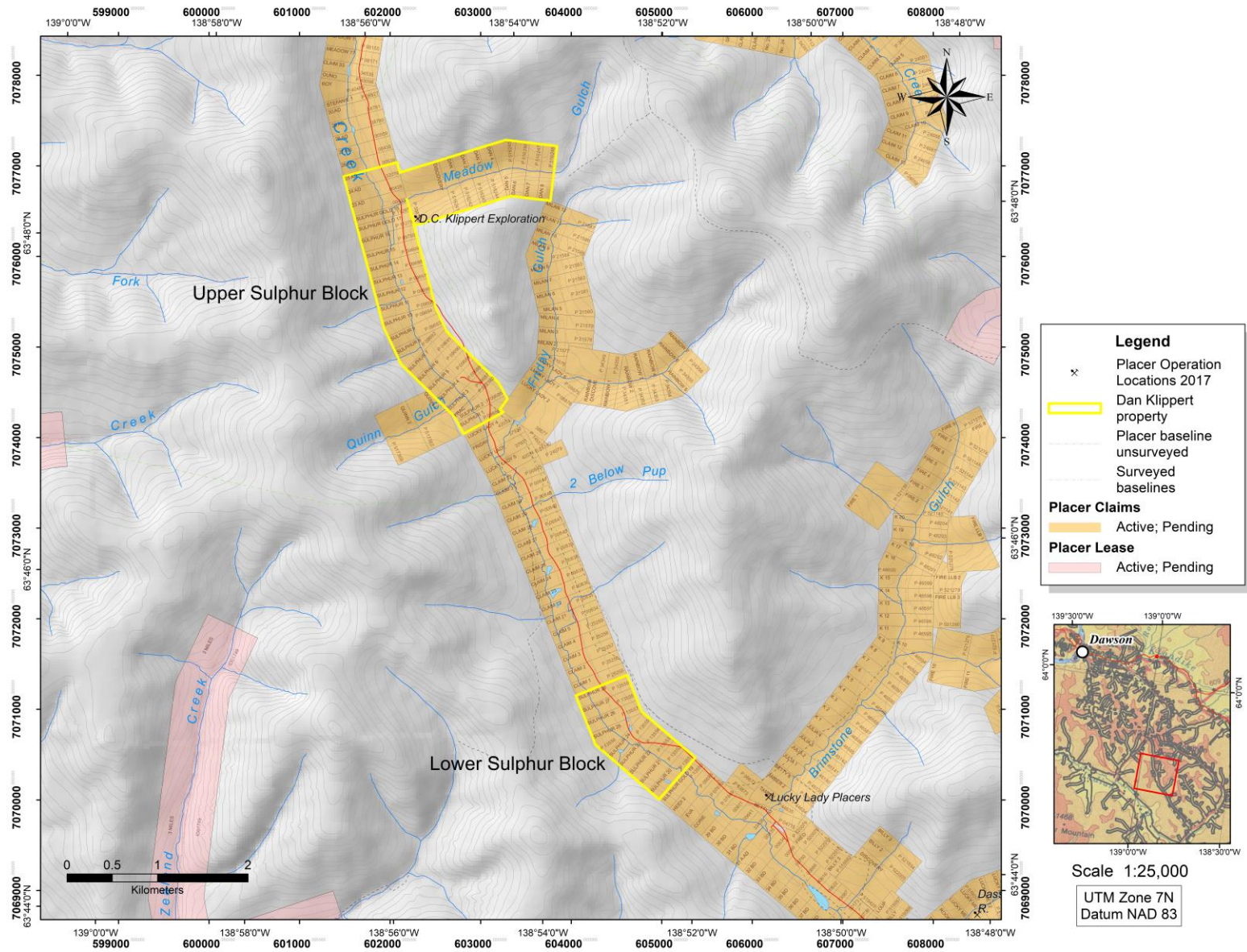


Figure 2 – Location of Sulphur Creek Klippert Property claims and adjacent placer claims on Sulphur Creek.

## History of Exploration and Mining – Sulphur Creek

Sulphur Creek has been mined since the beginning of the Klondike Gold Rush in 1898, first by hand methods, and then by dredging. Green (1977) notes that three dredges mined on Sulphur Creek beginning in 1936. YCGC (Yukon Consolidated Gold Corporation) Dredge #6 mined 148,000 ounces between 1936 and 1966; YCGC Dredge #8 mined 212,000 ounces between 1937 and 1966 and YCGC Dredge #9 mined 113,000 ounces between 1938 and 1966.

Mechanical mining replaced the dredges after 1966 and dozens of operations have mined on Sulphur Creek from then up to the present day. Much of the activity is documented in LeBarge (2007) with more recent mining documented in LeBarge and Welsh (2007), LeBarge and Nordling (2011), van Loon and Bond (2014), and Bond and van Loon (2018). Gold production from these sources and Yukon Government royalty records shows a total of over 355,000 ounces produced from Sulphur Creek between 1940 and 2019. This does not include the hand mining from the 40+ years previous.

## Regional Bedrock Geology

Gordey and Ryan (2005) document that the major units in the Klondike area include: the Snowcap (Nasina) Assemblage, the Klondike Series, the Slide Mountain (Moosehide) Assemblage, upper Cretaceous Carmacks Group volcanics/volcanoclastics, and Eocene intrusives. The basement unit is the Snowcap (Nasina) Series, consisting of metamorphosed schist and quartzite. It is overlain by the Klondike Series, a dominantly quartzofeldspathic schist of Early Permian (280 m.y.) age. Mid-Permian Sulphur Creek orthogneiss cuts the Klondike Schist extensively along Sulphur Creek. In the south and west Klondike, the Klondike Series is in contact with Late Devonian to Mississippian Simpson Range orthogneiss. Structurally overlying the Klondike and Nasina Series are greenstone and altered ultramafic of the Slide Mountain (Moosehide) Assemblage. In the east and south Klondike, upper Cretaceous andesitic volcanics and clastic sediments occur. These units are intruded by Eocene age rhyolite and diorite dykes and sills.

## Local Bedrock Geology

Figure 3 shows the bedrock underlying lower Sulphur Creek as Sulphur Creek orthogneiss (map unit PqS), while the upper part of Sulphur Creek (including both of the property claim blocks) are underlain by Klondike Schist (map unit PK2). Farther to the east lies Snowcap (Nasina) assemblage quartzite and schist (map unit PDS1).

## Quaternary History

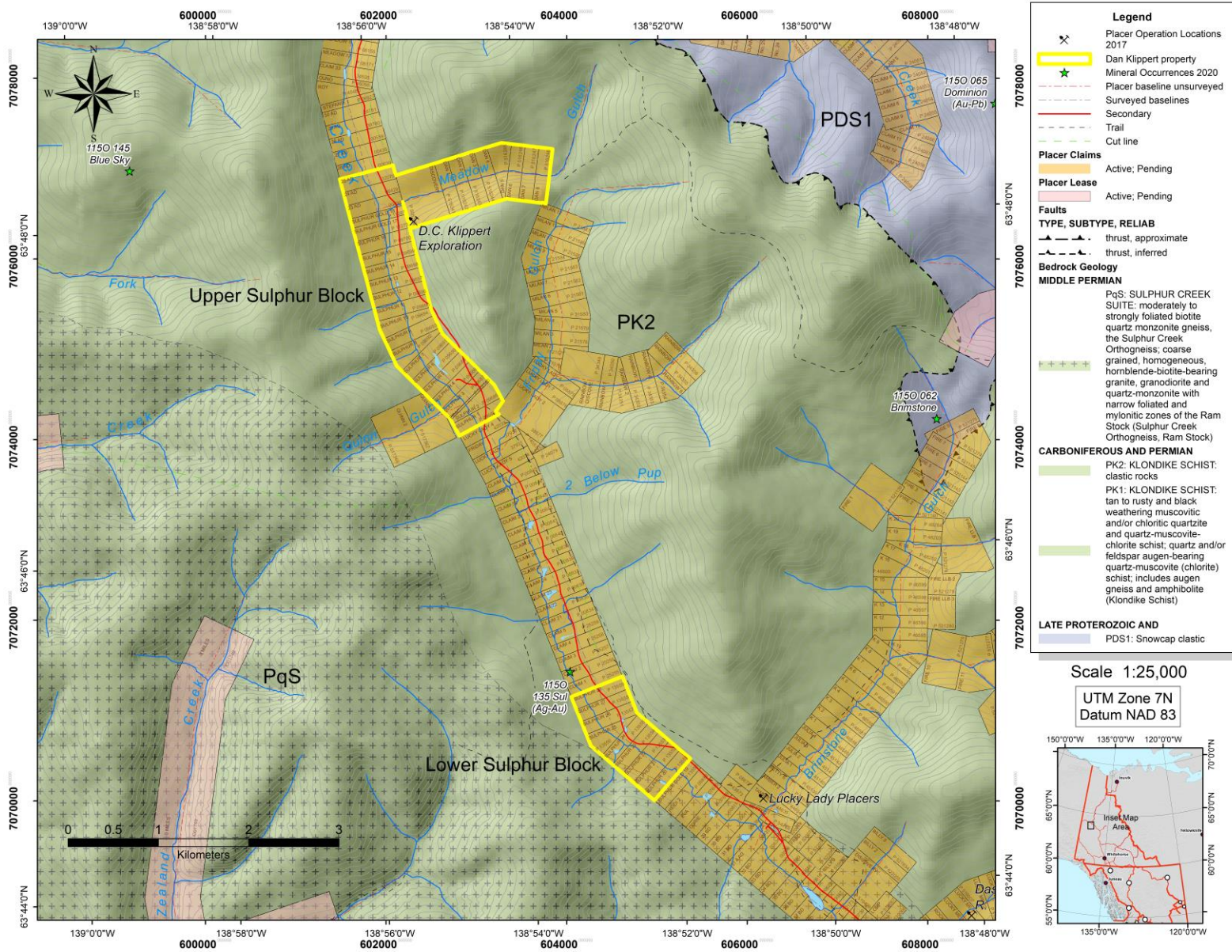
Most of the Klondike region has not been glaciated (Duk-Rodkin, 1999; Jackson et al., 2001). However, the marginal effects of a pre-Reid glaciation deposited glaciofluvial gravel along Australia Creek and Indian River. These were sourced from meltwater channels which breached the divide in the headwaters to the east.

Sulphur Creek itself has not been glaciated, therefore the early Tertiary, Pleistocene and younger alluvial sediments are preserved in various geological settings.

## Surficial Geology

Froese and Jackson (2005) and Froese (2005) show that there are surficial units of several ages and types on Sulphur Creek, as shown in Figure 4. These include: CEaP/AtT (Pleistocene colluvial-aeolian sediments overlying Tertiary alluvial terrace sediments), CEaP (Pleistocene colluvial-aeolian sediments), AtP (Pleistocene alluvial terrace), ACxP (Pleistocene alluvial/colluvial complex), Ax (alluvial complex), Cx (colluvial complex), Cl (landslide) and Cb-v (colluvial blanket-veneer). In general, the AtT (Tertiary alluvial terrace) units are more prevalent downstream, whereas upstream reaches are dominated by ACxP (Pleistocene alluvial/colluvial complex) and Cx (colluvial complex).

The area of the “Upper Sulphur Block” of claims is mapped as CEaP on the valley sides and tailings in the valley centre, with Cb-v (colluvial blanket-veneer) on the hills above. The “Lower Sulphur Block” of claims is mapped as Cx (colluvial complex), CEaP/Ax (colluvial eolian apron over alluvial complex) and tailings.



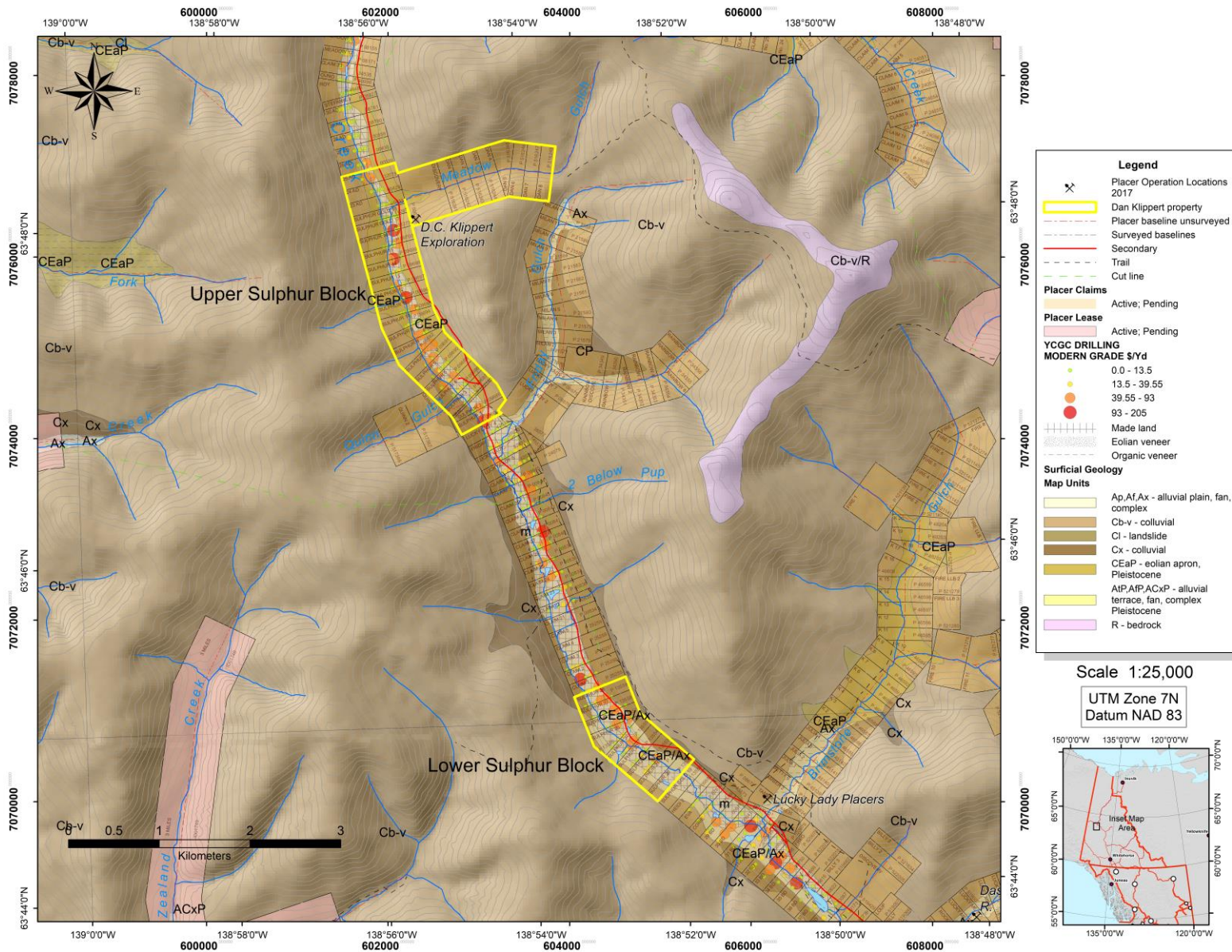


Figure 4 - Surficial Geology, upper Sulphur Creek, after Froese and Jackson (2005) and Froese, (2005). YCGC drill holes from van Loon, (2017).

## 2022 Placer Exploration Program

### Upper Claim Block

#### *Upper test near Meadow Gulch*

The 50 ton excavators and D8K Dozer with a rock truck loaded with extra excavator buckets, mobilized upstream to the confluence of Sulphur creek and Meadow gulch. The last exploration indicated a possible ancient iron stained channel.

A trench was dug by first removing the mud and waste off of a 300 foot long trench where signs of a channel were discovered last exploration. The overburden had to be staged up and over 3 times with the 450DLC excavator to expose the old stream channel.

Test pits were excavated in the orange gravel averaging a depth of 5 feet every 30 feet. 1 cubic yard of gravel taken from bedrock was hand bombed from a suspended excavator bucket into a test sluice. 10 samples were washed gently through the Longtom. Concentrates were screened, cleaned and then the gold was weighed from each pit.

Ten pits were dug down to bedrock through a 6 to 8 foot section of ancient stream gravel. The 1 cubic yard sample was washed through a 10 foot by 1 foot steel long tom. The sample was taken from the bedrock contact. The sample was suspended over the tom and was fed slowly over the sluice by hand shovel.

The pit locations are shown on Figure 5, and test results are given in Table 2.

Table 2 – Test results, upper test near Meadow Gulch

Bulk Sample #	Grams per cubic yard
1	.10
2	0.0
3	.15
4	.25
5	.15
6	.10
7	.15
8	.10
9	.10
10	.10

### ***Lower test near Friday Gulch***

Ten pits were dug into the bedrock at the test location near Friday Gulch.

The pits were dug in a 150-foot square area. The samples were screened and washed through a 1 foot by 10-foot sluice run. The samples were mucked out of the excavator bucket and hand fed through the test sluice. A one cubic yard of decomposed bedrock was processed for each pit.

The pit locations are shown on Figure 6, and the test results are given in Table 3.

**Table 3 – Test results, lower test near Friday Gulch**

<b>Bulk Sample #</b>	<b>Grams per cubic yard</b>
<b>1</b>	.20
<b>2</b>	.25
<b>3</b>	.25
<b>4</b>	.40
<b>5</b>	.25
<b>6</b>	.20
<b>7</b>	.20
<b>8</b>	.0
<b>9</b>	.0
<b>10</b>	.0

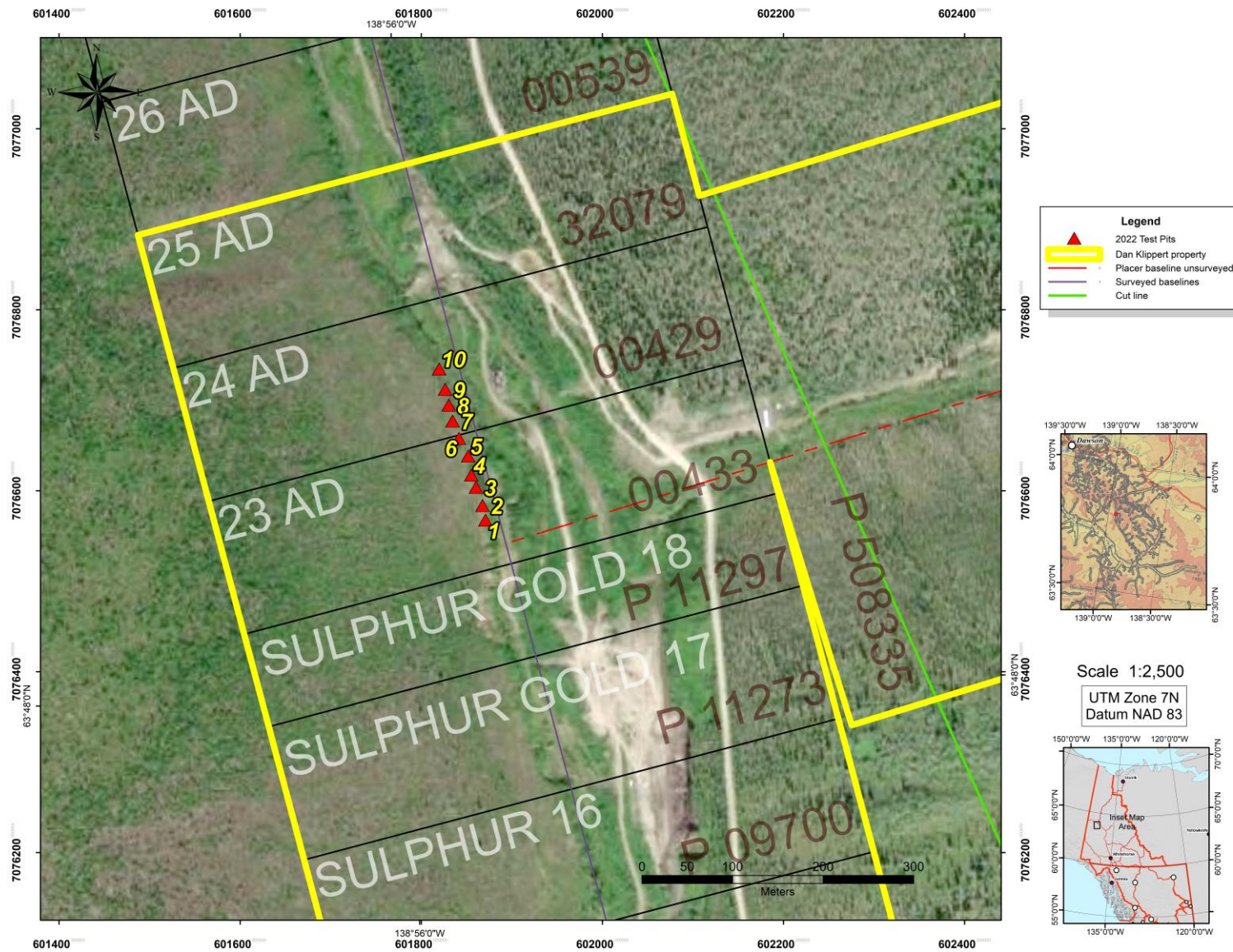


Figure 5 - Upper Sulphur Claim Block showing 2022 test pit locations near Meadow Gulch.

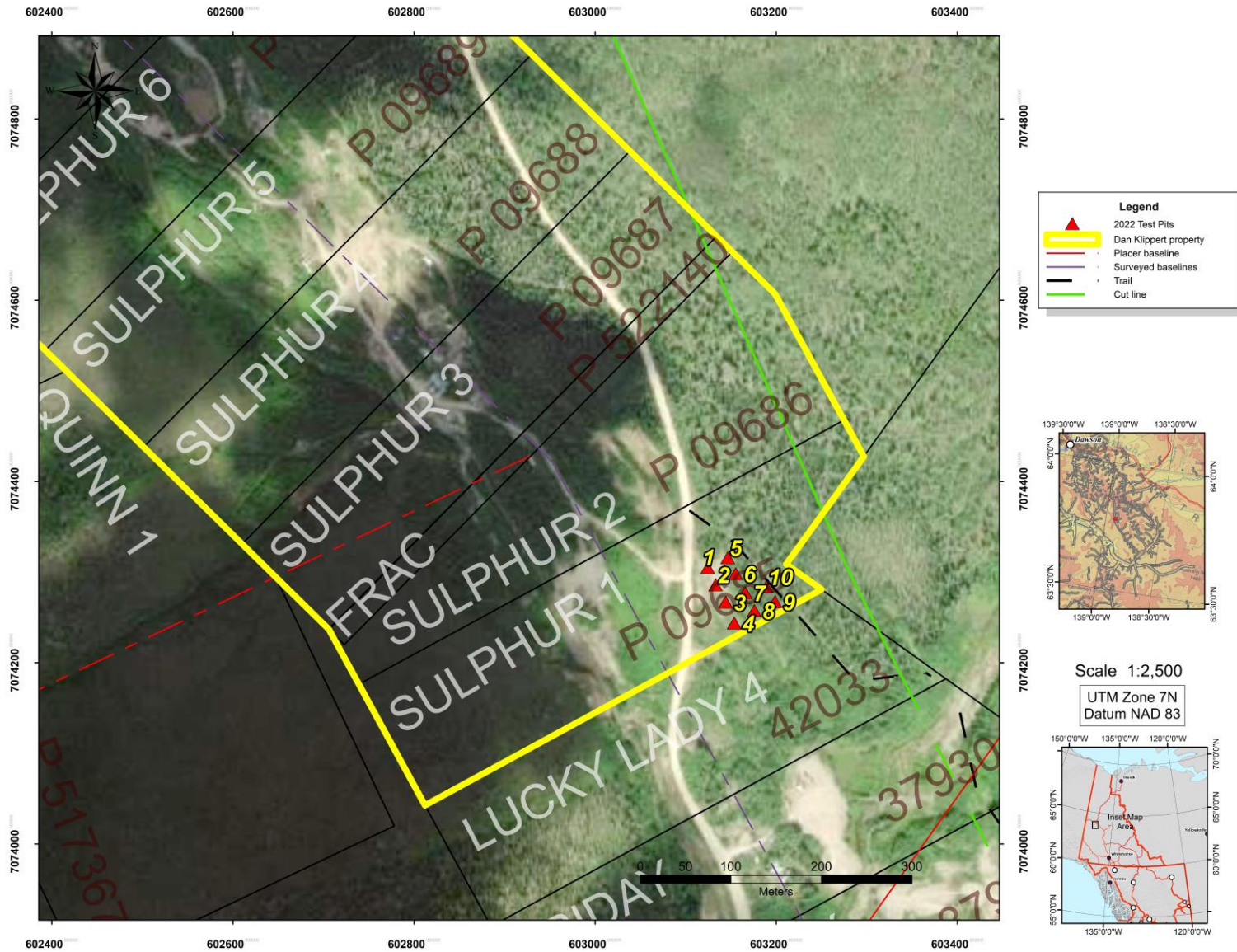


Figure 6 - Upper Sulphur Claim Block showing 2022 test pit locations near Friday Gulch.

## Lower Claim Block

The lower block was explored from the beginning of May to June 30. An exploration trench was dug on the downstream end of the Sulphur 20 (P 13551) placer claim, through the old YCGC dredge tailings to reach bedrock. Bedrock was encountered in a test pit dug in 8 feet of muddy slop water. The bedrock is a massive solid rock similar to what is exposed on the Lucky Lady claims, 3 claims downstream which were cat-mined after the dredges had mined the claim. Reports from the miners say the bedrock was very good when mined again.

Five pits were dug in the trench walls down to the water table. The creek was lowered to allow the 6 inch trash pump to drain a 10 foot sump rather than a 40 foot sump.

The exploration was cut short due to mechanical problems with the self priming Gorman Rupp volume pump. Without the pump the groundwater table would not allow further excavation due to massive sloughing, a danger to operator and machine.

## Conclusions and Recommendations

### UPPER BLOCK

The test pit exploration cross valley from Meadow Gulch revealed what appears to be an ancient channel, running along the extreme right limit of the Sulphur creek drainage. More exploration will be necessary to determine the length and depth of the deposit.

Test pits on bottom claim close to Friday gulch indicate gold values in decomposed bedrock. Drilling in and around this area should be carried out.

### LOWER BLOCK

Although the exploration carried out on the lower block of claims had to be postponed due to pump failure, panning in trench walls consistently produced fine gold. Bedrock was reached with the excavator through ten feet of thick slurry, and the sample was not possible. The excavator hit massive green to gray hard bedrock, similar to alleged high grade deposits mined 1000 feet downstream, by Lucky Lady Mining.

## **Statement of Qualifications – Dan Klippert**

Dan Klippert is a placer miner with 45 years placer mining experience, operating operations on Seattle creek, Johnson Creek and Highet Creek in the Mayo district. He has operated placer exploration programs in the Dawson district and has conducted hard rock and placer exploration programs with the YMIP and YMEP support in the past.

## References

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