Final Report YMEP21-020

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

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, 2022

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Introduction

The following is the final report for exploration work under grant YMEP21-020, 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 115O/15 and 115O/10, in the Dawson Mining District (Figure 2).

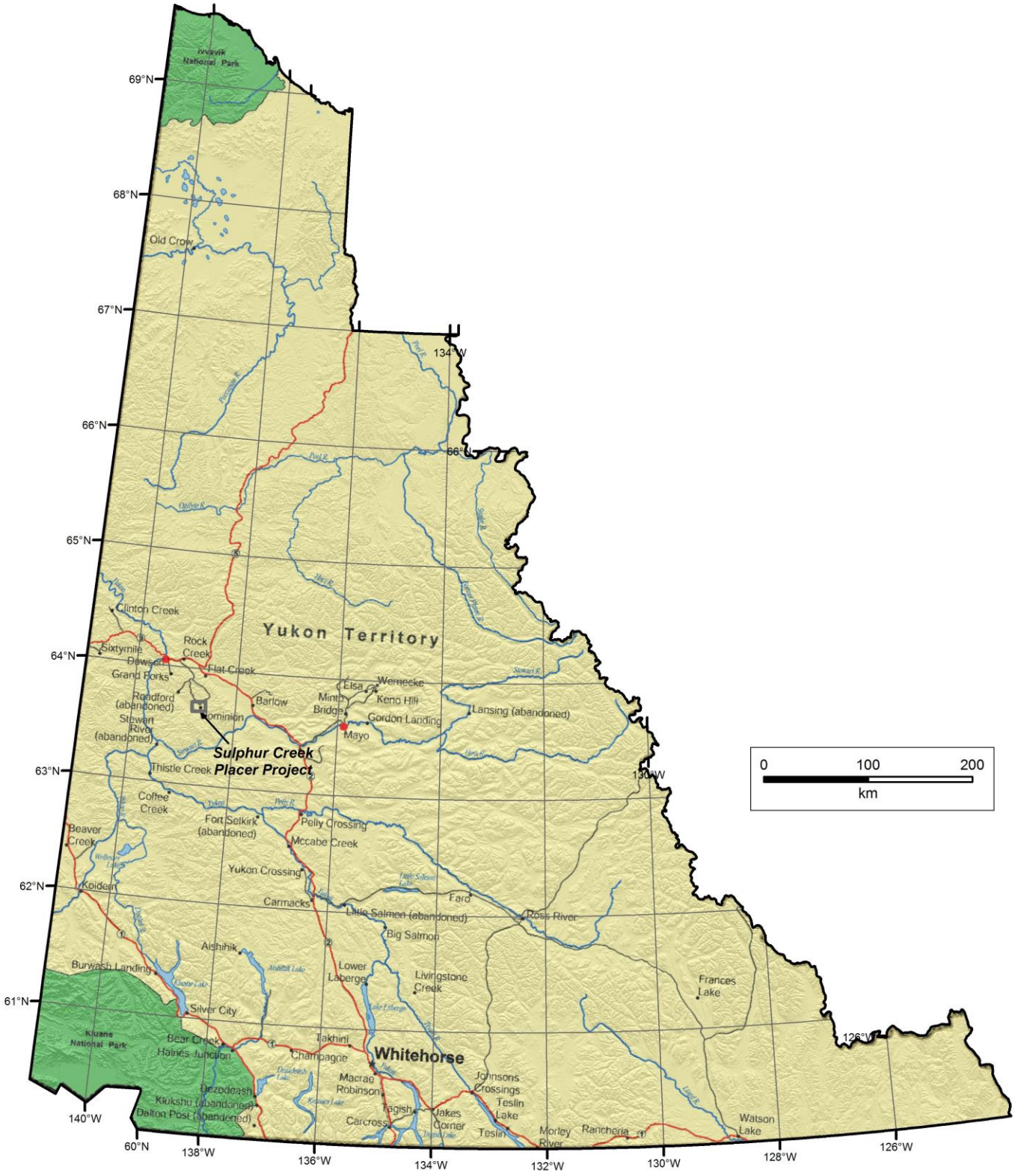

Figure 1 - General Location of Sulphur Creek Project, Yukon.

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.

Yukon

Claim Status Report

12 March 2021

Claim Name and Nbr.	Grant No.	Expiry Date	Registered Owner	% Owned	Excess	NTS #'s	Grouping	Permit	Settlement Land
23 AD	00433	2022/10/11	Daniel Klippert	100.00	59	115O15c	GD01753	LP01368	
24 AD	00429	2022/10/11	Daniel Klippert	100.00	54	115O15c	GD01753	LP01368	
25 AD	32079	2022/10/11	Daniel Klippert	100.00	54	115O15c	GD01753	LP01368	
Dan 1 - 8	P 516241 - P 516248	2022/10/11	Daniel Klippert	100.00	8	115O15c	GD01753	LP01368	
Discovery	P 508335	2022/10/11	Daniel Klippert	100.00	8	115O15c	D GD01753	LP01368	
P Frac	P 522140	2021/08/19	Daniel Klippert	100.00	0	115O15c	GD01753		
Sulphur 1 - 14	P 09685 - P 09698	2022/10/11	Daniel Klippert	100.00	75	115O15c	GD01753	LP01368	
Sulphur 15 - 16	P 09699 - P 09700	2022/10/11	Daniel Klippert	100.00	80	115O15c	GD01753	LP01368	
Sulphur 20 - 23	P 13551 - P 13554	2022/10/11	Daniel Klippert	100.00	69	115O10i	GD01753		
Sulphur 24 - 28	P 13555 - P 13559	2022/10/11	Daniel Klippert	100.00	68	115O10i, 115O15c	GD01753		
Sulphur Gold 17	P 11273	2022/10/11	Daniel Klippert	100.00	75	115O15c	GD01753	LP01368	
Sulphur Gold 18	P 11297	2022/10/11	Daniel Klippert	100.00	75	115O15c	GD01753	LP01368	

Criteria(s) used for search:

CLAIM DISTRICT: DAWSON CLAIM STATUS: ACTIVE & PENDING OWNER(S): KLIPPERT DANIEL REGULATION TYPE: PLACER

Total claims selected : 40

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

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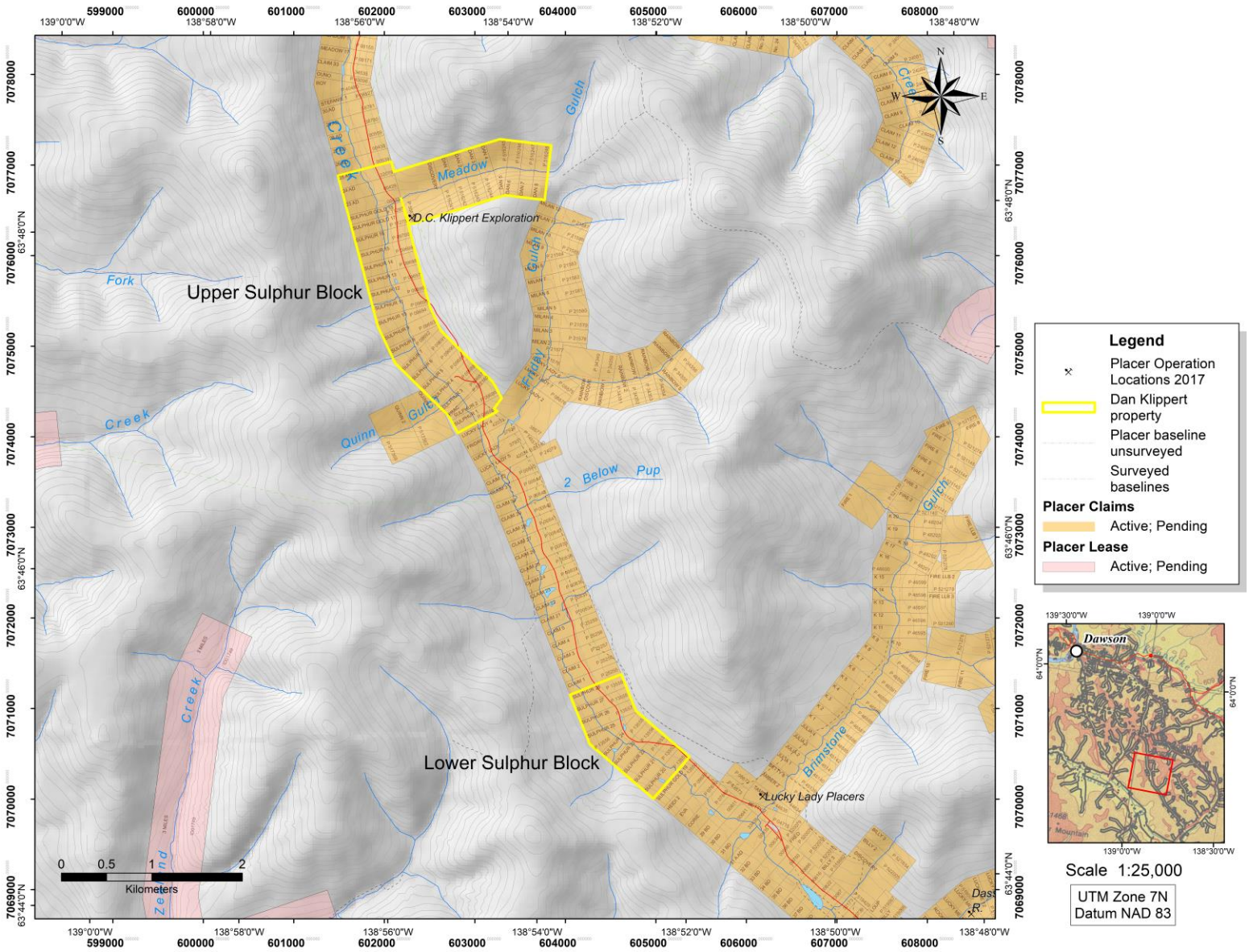

Figure 2 – Location of Sulphur Creek Klippert Property claims and adjacent placer claims on Sulphur Creek.

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.

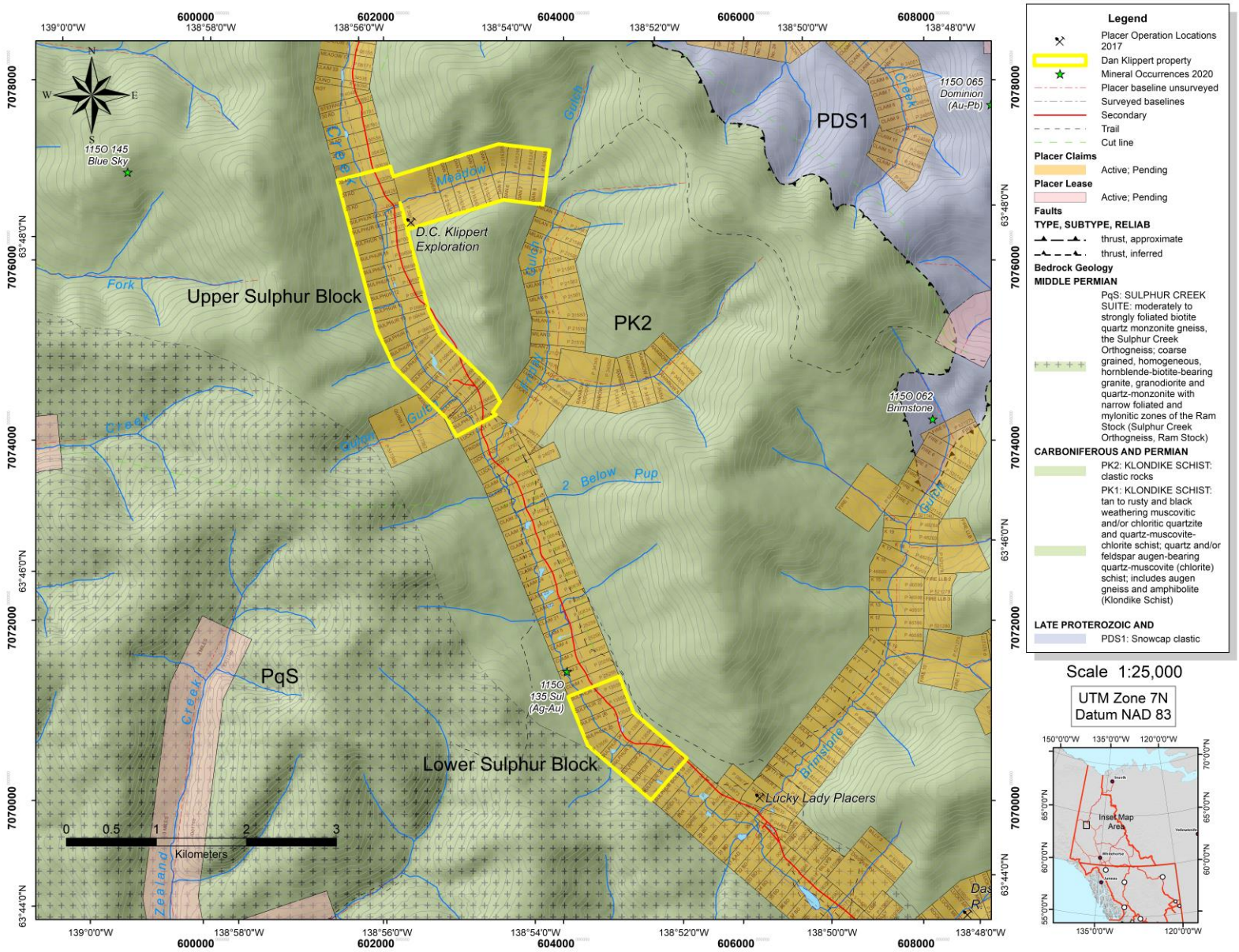

Figure 3 - Bedrock Geology of upper Sulphur Creek, after Yukon Geological Survey (2020).

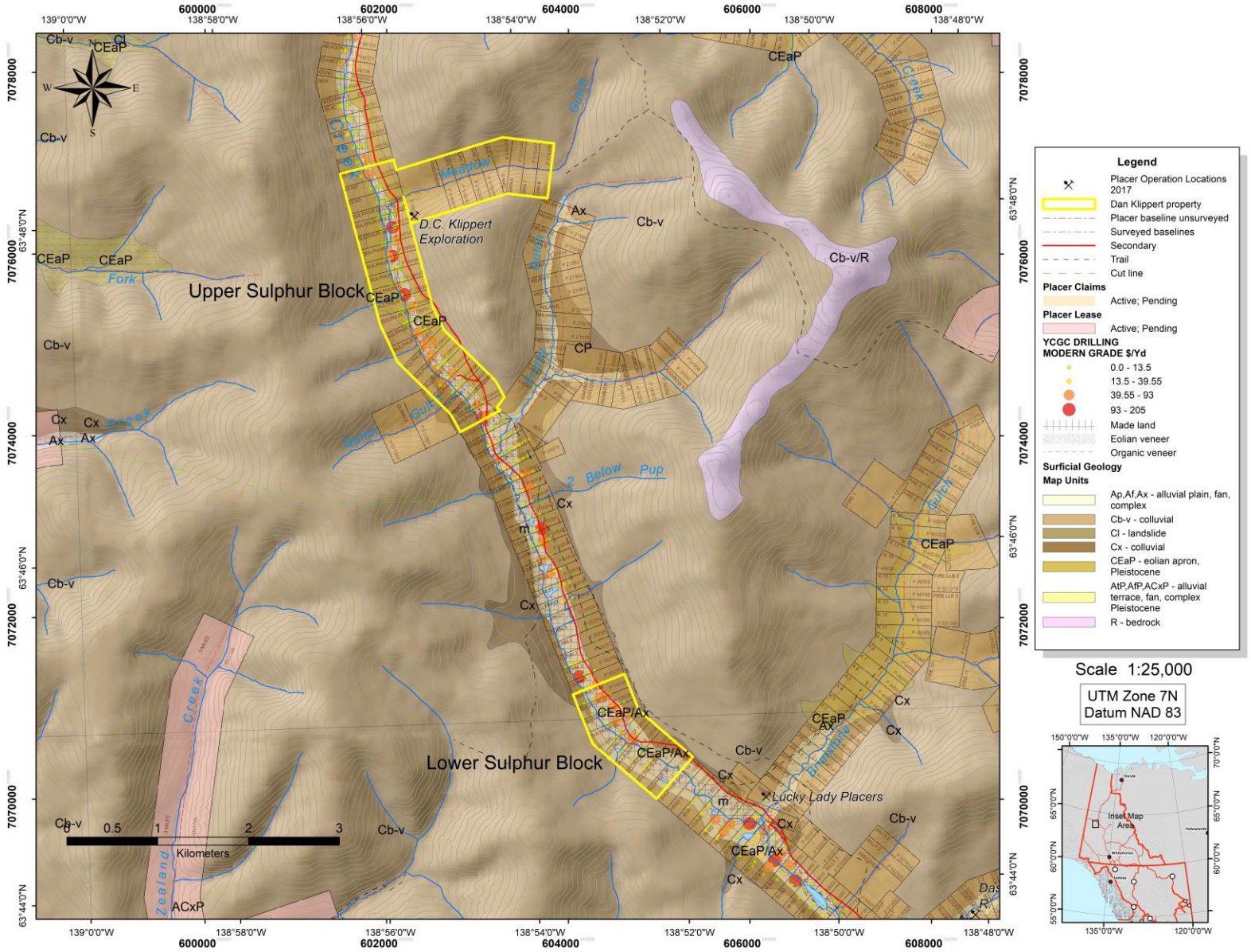

Figure 4 - Surficial Geology, upper Sulphur Creek, after Froese and Jackson (2005) and Froese, (2005). YCGC drill holes from van Loon, (2017).

2021 Placer Exploration Program

Upper Claim Block

Five, 1 cubic yard and five, 100 cubic yard bulk samples were excavated on the upper claim block during the 2021 season.

In August and September 2021, a 200-foot-long bench was stripped on the right limit of Sulphur creek directly across the valley from the mouth of Meadow Gulch. Twenty feet of mud and sloughed gravel, containing muddy broken bedrock with a significant amount of round rocks was removed from above the test sections. The test sections on bedrock were of an orange to blood red color which may have indicated an ancient channel. Five, 100 cubic yard bulk samples (1 to 5) were washed through a test plant. The material was then sluiced with a long-tom, hand panned and examined. The bulk tests produced fine placer gold. When examined under a magnifying glass, many pieces were revealed to be of an angular blocky shape.
Upstream of this area, five 1 cubic yard bulk samples (A to E) were collected and sluiced through a long tom.

The bulk samples are all plotted on Figure 5, and details are given in Table 2.

Table 2 - Bulk sample results, Upper Claim Block.

Bulk Sample	Volume (cubic yard)	Gold weight (g)	Grade (troy oz/cubic yard
A	1	.1	0.00321
B	1	.15	0.00482
C	1	.15	0.00482
D	1	.15	0.00482
E	1	.20	0.00643
1	100	10	0.00321
2	100	15	0.00482
3	100	10	0.00321
4	100	20	0.00643
5	100	10	0.00321

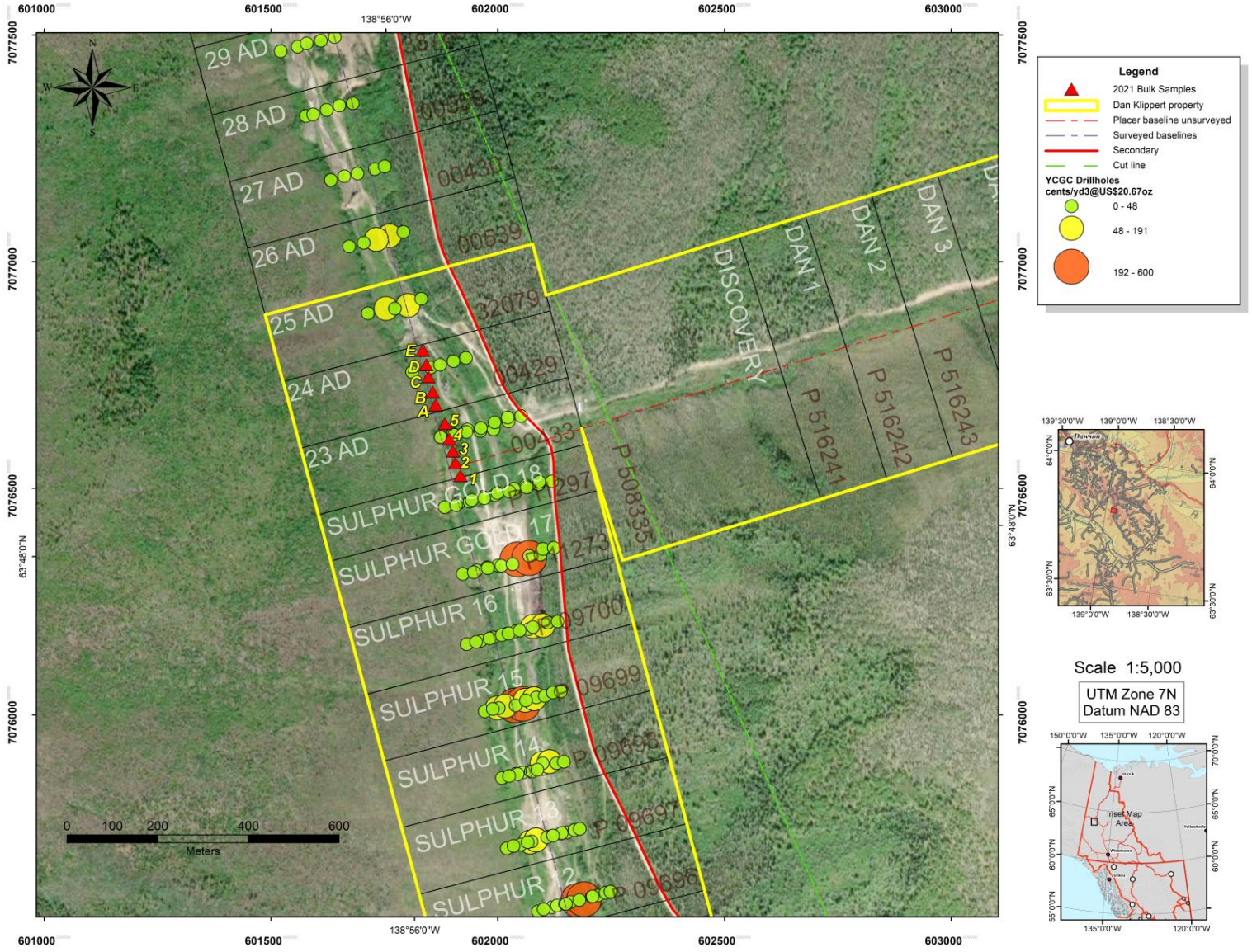

Figure 5 - Upper Sulphur Claim Block showing 2021 bulk sample locations. YCGC drill holes from Historic Placer data Website (2021).

Figure 6 – A 450DLC John Deere excavator loads a 35D Volvo rock truck while bulk sampling in the upper claim block.

Lower Claim Block

Two 450DLC John Deere excavators were mobilized the first of October downstream from the confluence of Meadow Gulch and Sulphur creek 7 kilometers, to claim number, "Sulphur 28". A D8K dozer and a 35D Volvo rock truck were then mobilized to assist in the work.

Through the month of October, a wide trail was constructed from the top claim, "Sulphur 28" to the upstream boundary of claim "Sulphur 19". The planned creek diversion was postponed due to the lateness of the licence, thus not allowing proper drainage to reach bedrock.

Ten exploration pits were dug on the downstream claims of the lower block after access was made. It was not possible to test bedrock because the water table kept sloughing the sides of the pits until it jeopardized the excavator. All pits were back filled after panning.

Of the ten pits all but 2 panned 3 to 15 specs (colours) of gold per pan from the tailing tested above the water table. All the test concentrates in each pan had ample black sand and trace sulphides.

The test pits are plotted on Figure 7, and the results are given in Table 3.

Table 3 - Results of test pitting, Lower Claim Block

Test Pit	Number of Colours
1	3
2	0
3	11
4	3
5	5
6	16
7	3
8	0
9	15
10	7

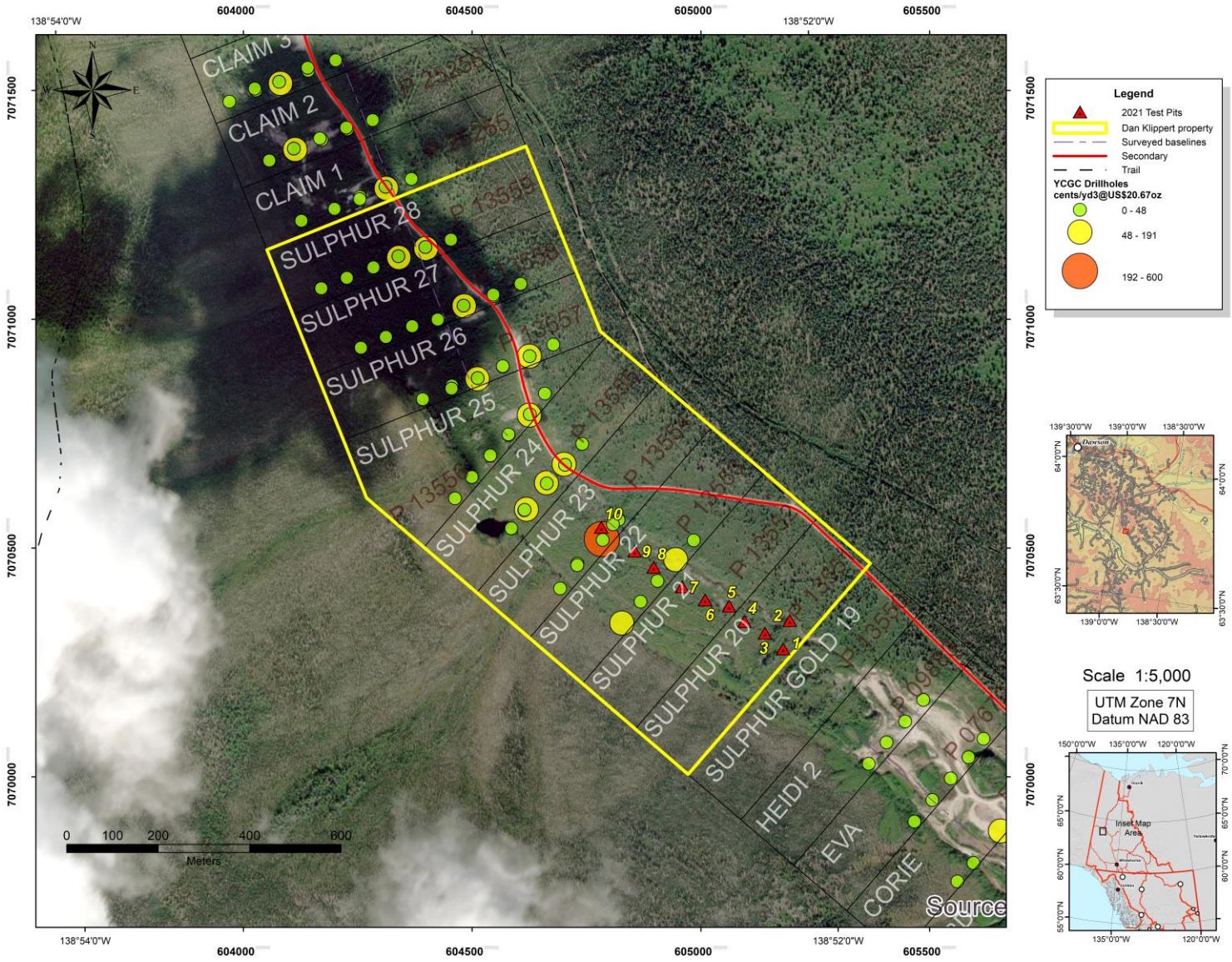

Figure 7 - Lower Sulphur Claim Block showing 2021 test pit locations. YCGC drill holes from Historic Placer data Website (2021).

Conclusions and Recommendations

The lack of a water licence on the lower block of claims precluded most of the planned exploration activities in this area. This problem is Yukon-wide as many miners and operators have had delays spanning several years in obtaining their water licenses. The total number placer water licenses granted in 2021 was 19, when the previous year was 52.

The water licence amendment was finally granted in August, however by this time no drills of any type were available.

Nonetheless, limited exploration with minimal disturbance on the lower claim block took place in the form of test pits above the water table. These test pits all showed promising gold colours.

The bulk samples excavated on the right limit of Sulphur Creek on the upper claim block all returned some gold. Although the grades encountered were sub-economic, the gold appeared to be angular and possibly close to source. Further exploration is warranted in this area.

Future exploration on the lower claim block should take place in the form of drilling and bulk sampling, which will be facilitated by the now-active water licence.

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 support in the past.

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