Canada

Yukon Territory

Yukon Government

DESCRIPTIVE NOTES

PHYSIOGRAPHY

The map area is dominated by three south-east trending valleys: Eagle Creek, East McQuesten River and Lynn Creek. Eagle Creek empties Bossmoor Lake and drains valleys and ranges in the southern fringe of the Ogilvie Mountains. The highest summit in the map area is Bossmoor Mountain at 6000 feet. Eagle Ridge separates Eagle Creek from the East McQuesten River. The East McQuesten River progresses northwest of the map area, and until Eagle Creek, the remainder is broad, valley characteristic to confluence with the North McQuesten River outside map area. South of the East McQuesten River is a series of ridges that surround the upper Haggart Creek drainage (these are Haggart Dome, Lynn Dome and Potato Hills). Lynn Creek valley lies south of Potato Hills. Haggart, Dome and Lynn Creek valleys are the only major north south trending valleys in the map area.

QUATERNARY HISTORY

In central Yukon, the Quaternary period is characterized by multiple glaciations and interglaciations. The surficial of Cordilleran ice in Yukon consisted of glaciers originating from accumulation zones in the Ogilvie, Wernecke, Selwyn, Pelly, Cassiar and St. Elias mountains. Ice from these accumulations flowed into the Yukon and formed the central Yukon plateau region. The Dublin Gulch map area was glaciated by ice originating in the Ogilvie and Wernecke mountains. From oldest to youngest the main glacial episodes are the pre-Reid, Reid and McConnell glaciations.

The pre-Reid episode represents multiple unidentified glaciations that occurred sporadically between 3.5 million and 200,000 years ago. Landforms from these glaciations have been subsequently eroded and are difficult to identify. In the map area evidence of pre-Reid Cordilleran ice is limited to isolated erratics associated Reid glacial till and to rare deposits exposed in section below Reid glacial sediments. Because the ages are fragmentary, the pre-Reid limit was not mapped. Pre-Reid bore erratics are found at 4000 feet elevation on Bossmoor Mountain and 4500 feet on Haggart Dome. Ice deposits pre-Reid glacial till are noted on Potato Hills south of Mann Bay. Gulch between 4000 and 4500 feet elevation. Pre-Reid erratics were also noted up to 4800 feet on Potato Hills. All of the major valleys were glaciated by pre-Reid ice in the map area.

The Reid glaciation occurred at least 200,000 years ago (Bender, 1994) and presumably folded similar flow lines to the pre-Reid glaciations, but was less extensive. Reid glacial landforms are moderately preserved, enabling the glacial limit to be approximately determined by and photo interpretation. Reid Cordilleran ice advanced into the map area from the northeast corner and scarred a minimum elevation of approximately 4400 feet a.s.l. The ice spilt into two valleys (lobes) one of which advanced into Haggart Creek valley and the other followed down the East McQuesten River valley. South flowing ice from the McQuesten Lake South McQuesten River lobes crossed a divide into the East McQuesten River valley. South flowing ice from the McQuesten lobe. Ice from the South McQuesten valley also glaciated the valleys of Lynn Creek and Sluice Creek and flowed over the Haggart Creek drainage. Ice reached elevations of at least 3600 feet on the south side of Potato Hills, 3500 feet at Sluice Gulch and 3300 feet at the Dublin Gulch/Hanuse Creek and Chalice Creek. Ice advanced to the highest position of at least 4000 feet. Although most of Haggart Creek drainage was occupied by the Reid ice, the effect of the ice on the valley was less than that of deposition than erosion, particularly in places that have been glacial in nature. The trains area consisted of Haggart Creek to regional ice flow, probably in most places scour and resulted in combination of good placers that were subsequently buried beneath a blanket of till and outwash. This present section was embedded by Haggart Dome, Lynn Dome and Potato Hills which provided a topographic and aerial barrier to the ice that ingested the headwaters of Haggart Creek and Dublin Gulch.

Cordilleran ice from the McConnell glaciation is less inferred to have advanced into the map area between 17,000 and 30,000 years ago (Bond, 1997). McConnell landforms and the glacial limit are easily recognized in the map area. The McConnell Cordilleran ice, which affected the map area originated from the northeast in the Ogilvie Mountains. Ice advanced down the East McQuesten River and into the Eagle Creek valley and terminated near the mouth of Lynn Creek. East McQuesten River ice also entered Eagle Creek valley and terminated at Bossmoor Lake. Margins of former ice marginal channels near the terminus of each lobe suggest that the glacier stagnated in place. This is supported by hummocky moraine in the valley bottoms and the lack of recessional (retreat) moraines. The hummocky moraine in Eagle Creek valley also modified lobe drainages, which led to the creation of Bossmoor and Eagle lakes. The South McQuesten ice lobe entered the map area at the head of Lynn and Lime creeks. Ice flowed north up Lime Creek, terminating just to the mouth of the East McQuesten River valley. South McQuesten ice continued south into Lynn Creek and terminated approximately 2 km upstream from the confluence of Lynn and Sluice creek.

PLACER POTENTIAL

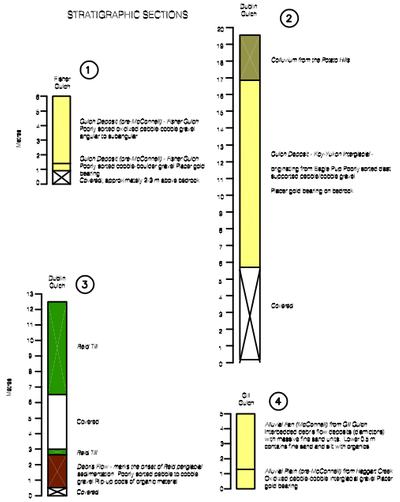
The physiography and geology of Dublin Gulch suggests that placer potential exists in the Haggart Creek drainage. The placer potential of Dublin Gulch is limited. The second placer is the orientation of drainages with respect to the prevailing ice flow. Valleys which are parallel to regional ice flow are broad and contain thick glacial deposits, whereas the tributaries of Dublin Gulch placer area is deeply incised in valleys that are at right angles to the Cordilleran ice flow and drained into the Potato Hills glacial lobe. Placer potential also exists in the Lynn Creek drainage, which is also dominated by Potato Hills. The limiting factor for Lynn Creek placer is that access is a orientation parallel to glacial flow. The valley sides are deep to bedrock (valley very deep. Our sample yielded 50,000 gold from surface alluvium. Mining at a good source of placer exists in large alluvial fans. Higher gold concentrations may be found at the base of the valley fill where pre-Reid marginal and glacial sedimentation may have concentrated gold and other heavy minerals on bedrock.

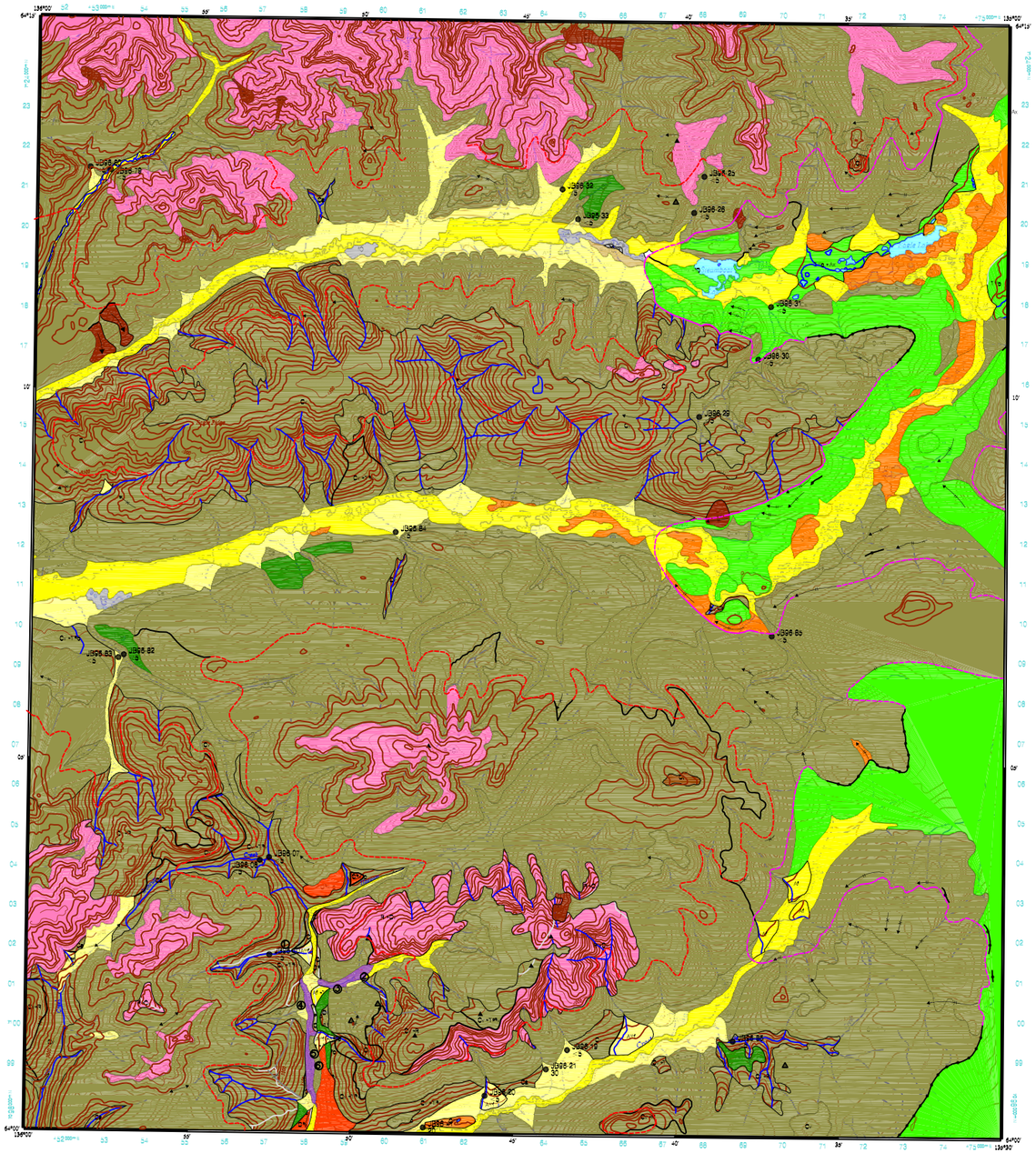
The main placer areas are Haggart Creek, Dublin Gulch, Hanuse Creek and Gil Gulch. In Haggart Creek, gold has been placer mined from the modern alluvial plain and from alluvial fans and terraces buried under alluvial fans. On Dublin Gulch gold was placer mined from the modern alluvial channel and gravel terrace. Gold contains gold on placer gold. The placer deposit presently being mined at Gil Gulch is a Haggart Creek alluvial terrace buried beneath the Gil Gulch alluvial fan.

Accessible placers may exist at terraces of tributaries of Lynn Creek. Six small streams drain south from Potato Hills into Lynn Creek, each of these has the largest being Ray Gulch, has a large alluvial fan which has placer potential. Placer potential and geologically similar to Dublin Gulch placer. The combination of ice-induced alluvial fans placer and geologically during the McConnell glaciation. The combination of ice immobilization in Potato Hills (Yukon Hills 1350 ft) and moderate sized geomorphic relief (300 000 gold from a dry creek) immediately west of Ray Gulch, suggests the possibility of a gold source and potential for placer gold. The gullies are small, hydraulically and larger than tributaries to Dublin Gulch in the accessible side of Potato Hills, which has been successfully mined in the past.

Sluice Creek is a tributary to Lynn Creek on the south side of the valley, 3 km upstream from Ray Gulch. Gold mineralization is focused from the Lion Claims immediately south of the creek and this area is probably the placer source for placer gold in Sluice Creek. The lower end of the creek is confined to a dark gray containing conglomerate colluvium which in turn is derived from a bedrock. Which forming (nodular) approximately 1 km downstream from the mouth of Sluice Creek may be the most prospective part of the drainage.

STRATIGRAPHIC SECTIONS

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