

# Yukon Placer Mining Overview, 2007

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## PLACER MINING

Today, more than 100 years after the discovery of gold in the Yukon, placer mining is still an important sector in the Yukon's economy. Royalty records, which represent the minimum amount of gold production, show that over 16.6 million crude ounces (518 tonnes) of placer gold have been produced to date in the Yukon – at today's prices that would be worth more than \$9.8 billion.

In 2007, there were 107 active placer mining operations employing approximately 350 people directly. Although the total number of operations was only one more than in 2006, the industry saw a fair amount of transition: ten operations moved to new drainages, four operations closed, nine operations were sold and five new mines began operating. Although most placer operations are still small and family-run (with an average of three or four employees), there has been a recent trend for small, relatively inactive properties being sold to new owners and re-activated. In addition, several mine owners now own more than one active property, so there appears to be a shift towards larger operators.

As in past years, weather played a factor in the mining process, heavy snowfall over the winter in central and southern Yukon delayed the start of the season for many operators, but warm weather in September and October allowed many miners to sluice well into the fall.

There are ten placer mining areas (Fig. 1) distributed throughout the four Yukon Mining Districts. The majority of active placer mining operations were in the Dawson Mining District, followed by the Whitehorse Mining District and the Mayo Mining District. No mines are currently active in the Watson Lake Mining District, although there are a few exploratory properties along the Pelly and Liard rivers.

The total Yukon placer gold production in 2007 was 63,929 crude ounces (1 988 400 g), compared to 58,294 crude ounces (1 813 100 g) in 2006. The value of this 2007 gold production was CDN\$38.13 million or US\$35.63 million (Fig. 2).

Approximately 88% of the Yukon's placer gold was produced in the Dawson Mining District, which includes the unglaciated drainages of Klondike River, Indian River, west Yukon (Fortymile and Sixtymile rivers) and lower Stewart River. The remaining gold came from the unglaciated Moosehorn Range in the Whitehorse Mining District, and other placer mining areas in the glaciated Mayo and Whitehorse mining districts which include Clear Creek, Mayo, Dawson Range, Kluane, Livingstone and Whitehorse South.

Reported placer gold production from Indian River drainages in 2007 increased dramatically over 2006, from 18,008 crude ounces (560 110 g) to 24,436 crude ounces (760 050 g). With the exception of Quartz Creek, all other drainage production increased, with the most dramatic rise seen on Dominion Creek.

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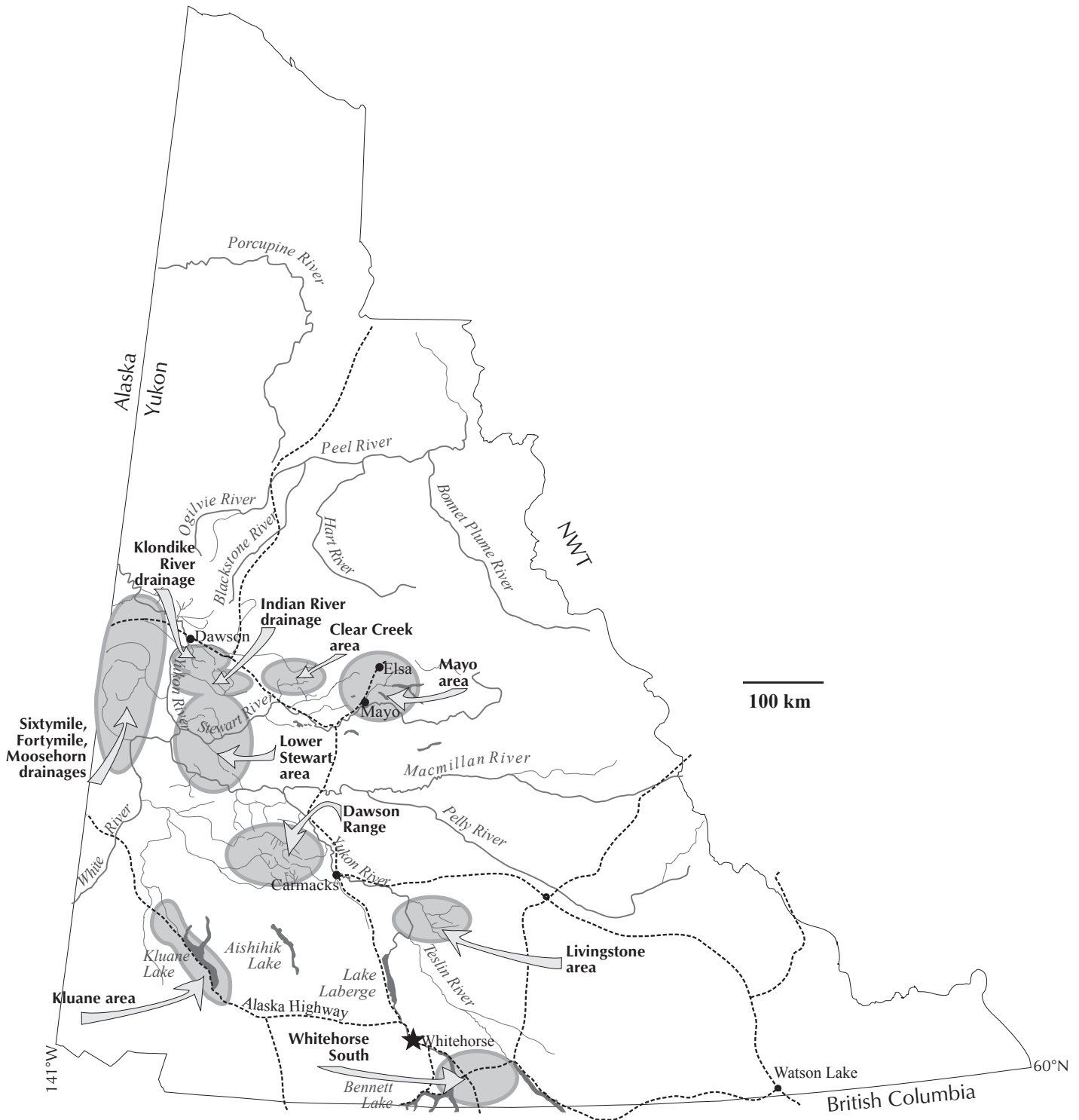


Figure 1. Yukon placer mining areas.

In Klondike area drainages, production decreased from 15,442 crude ounces (480 300 g) in 2006 to 11,621 crude ounces (361 450 g) in 2007. Notable decreases were seen on Hunker and Eldorado creeks, while Bear, Lindow and Bonanza creeks all saw increases.

West Yukon (Sixtymile, Fortymile and Moosehorn Range) placer gold production increased from 9333 crude ounces (290 300 g) in 2006 to 14,914 crude ounces (463 880 g) in 2007. The largest increase was from Sixtymile River, while Matson Creek and Ten Mile Creek also saw significant increases.

Reported production from operations in the Lower Stewart drainages was down in 2007, to a total of 5424 crude ounces (168 700 g) from 7884 crude ounces (245 200 g) the previous year. Black Hills, Maisy May and Kirkman creeks increased substantially while Thistle and Scroggie saw a drop in reported production.

Clear Creek drainages saw an increase in gold reported over the year, from 232 crude ounces (7220 g) in 2006 to 363 crude ounces (11 290 g) in 2007.

In the Dawson Range, reported placer gold production increased from 735 crude ounces (22 900 g) in 2006 to 912 crude ounces (28 370 g) in 2007.

In the Mayo area, gold production increased substantially from 1471 crude ounces (45 750 g) to 2755 crude ounces (85 690 g). A dramatic increase was seen in reported royalties from Owl Creek.

In the Kluane area, reported placer gold production dropped from 2260 crude ounces (70 290 g) to 887 crude ounces (27 590 g). Burwash Creek saw an increase while Gladstone Creek had a significant drop in reported gold.

The Livingstone area saw some active mining on Little Violet Creek, with 52 crude ounces (1600 g) of gold reported, down from 64 crude ounces (2000 g) the year before.

In the Whitehorse South area, no gold was reported in 2007, in contrast with last year's 24.8 crude ounces (771 g) reported from Iron Creek.

## PLACER EXPLORATION

There were at least 24 exploratory operations in 2007, up from 9 the year before. Placer miners throughout the Yukon continue to explore for new deposits, using traditional methods such as excavator trenching and bulk sampling, as well as auger, reverse circulation and churn drilling. Newer methods such as ground-penetrating radar, magnetometer surveys and resistivity surveys are also becoming popular.

One exploration highlight of the 2007 season was the continuing testing by Klondike Star Ltd. of the Indian River drainage between McKinnon Creek and Montana Creek. Several test pits were mined and an access road was

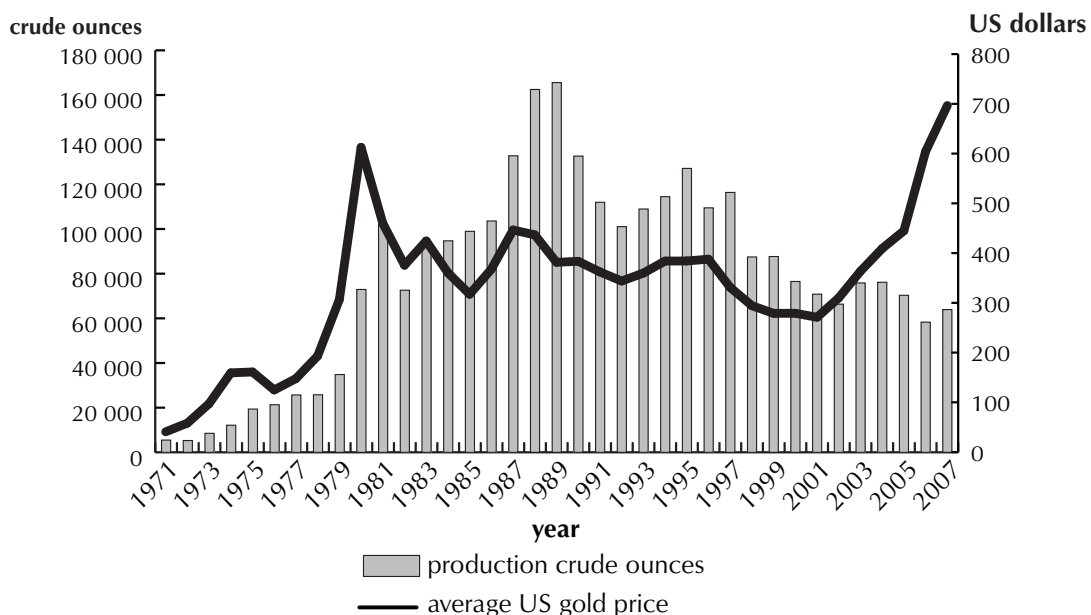


Figure 2. Yukon placer gold production figures and average US gold price, 1971-2007.



constructed, which may eventually link the middle reaches of the Indian River to its upstream reaches and Dominion Creek (Fig. 3).

The extensive development of the lower Sixtymile River drainage between the mouth of Ten Mile Creek and the confluence of Sixtymile River and Yukon River continued in 2007. In addition to the construction of several kilometres of road and an airstrip, a bridge was installed over the Sixtymile River. This improved access is favourable for increased development and testing of nearby drainages such as Twenty Mile Creek and Thirteen Mile Creek, as well as the upstream reaches of the Sixtymile River.

The staff at the Yukon Geological Survey and the Client Services and Inspection Division (Department of Energy, Mines and Resources, Yukon government) can provide information and advice regarding placer mining in the Yukon. Publications on placer mining in the Yukon are available through the Yukon Geological Survey office at Room 102, Elijah Smith Building, 300 Main St. Whitehorse,

Yukon. Many recent publications and maps can be downloaded for free from our website at [www.geology.gov.yk.ca](http://www.geology.gov.yk.ca).

## APERÇU

Aujourd’hui, plus de cent ans après la découverte des premiers gisements d’or dans le Yukon, l’exploitation des placers reste un important secteur de l’économie du Yukon. Plus de 16,6 millions d’onces brutes (518 tonnes) d’or placérien ont été produites à ce jour au Yukon, ce qui représente plus de 9,8 milliards de dollars au prix actuel de l’or.

En 2007, on a dénombré 107 sites d’exploitation directement sur des placers. Près de 350 personnes étaient employées directement sur ces placers. Bien que l’on ait compté qu’un seul site exploité de plus qu’en 2006, les transitions se sont avérées nombreuses dans cette industrie : dix sites ont été déplacés vers de nouveaux bassins versants, quatre sites ont été fermés,



**Figure 3.** Aerial view of Klondike Star Ltd. test pits on Indian River, July 2007.

neuf sites ont été vendus et cinq nouvelles mines sont entrées en exploitation. Bien que la majorité des sites d'exploitation sur placers soient de petites entreprises familiales qui emploient en moyenne de trois à quatre employés, on a observé récemment une tendance à vendre les petites propriétés relativement inactives à de nouveaux propriétaires et à les remettre en activité. En outre, plusieurs propriétaires de mines possèdent aujourd'hui plus d'une propriété active, alors il semble y avoir une tendance vers de plus grands exploitants.

Comme ce fut le cas au cours des dernières années, les conditions météorologiques ont joué un rôle important dans les activités minières et les chutes de neige importantes au cours de l'hiver dans le centre et dans la partie sud du Yukon ont retardé le début de la saison pour de nombreux exploitants. Cependant, les températures chaudes du mois de septembre et du mois d'octobre ont permis à de nombreux mineurs de poursuivre efficacement leurs activités à l'automne.

On compte dix zones d'exploitation de placers réparties dans l'ensemble des quatre districts miniers du Yukon (Fig. 1). La majorité des placers encore actifs sont situés dans le district minier de Dawson, le reste se trouvant dans les districts miniers de Whitehorse et de Mayo. Il n'y a présentement aucune mine active dans le district minier de Watson Lake, malgré la présence de quelques propriétés de prospection le long des rivières Pelly et Liard.

La production d'or dans les placers du Yukon a totalisé 63 929 d'onces brutes (1 988 400 g) en 2007 alors qu'elle s'élevait à 58 294 d'onces brutes (1 813 100 g) en 2006. La production d'or en 2007 est évaluée à 38,13 millions de dollars canadiens ou 35,63 millions de dollars américains (Fig. 2).

Approximativement 88 % de l'or placérien du Yukon a été produit dans le district minier de Dawson qui inclut les drainages non englacés de la rivière Klondike, de la rivière Indian, de l'Ouest du Yukon (rivières Fortymile et Sixtymile) et le cours inférieur de la rivière Stewart. Le reste de l'or a été extrait de la chaîne non englacée Moosehorn dans le district minier de Whitehorse et d'autres districts placériens dans les districts miniers englacés de Mayo et de Whitehorse qui comprennent Clear Creek, Mayo, la chaîne Dawson, Kluane, Livingstone et le Whitehorse Sud.

On dénombre au moins 24 activités d'exploration en 2007, soit neuf de plus que l'année précédente. Les exploitants de placers continuent à explorer de nouveaux gisements en utilisant des méthodes classiques, comme l'emploi d'excavatrice pour le creusement des tranchées, l'échantillonnage massif, ainsi que l'utilisation de tarières (ou mèches), le recours à la méthode de la circulation inverse et le forage au battage. De nouvelles méthodes, comme celles utilisant des géoradars, des levés magnétométriques et des levés de résistivité deviennent également de plus en plus populaires.

