# Yukon Placer Database
# Operations Report

**Field Name: Duncan Creek GoldDusters Ltd., 1975-2003** **Last Update: 09-Jan-2005**

**Status: Active Producer**

**Stream: Duncan: a tributary of Mayo River**

**Map Sheet(s): 105M/11, 105M/14**



## Operators

| Name | From (Date) | To (Date) | Comment |
|---|---|---|---|
| J. Brooks | 1975/01/01 | 1977/12/31 | |
| Frank Taylor | 1975/01/01 | 2003/12/31 | |

## Owners

| Name | From (Date) | To (Date) | Comment |
|---|---|---|---|
| Duncan Creek GoldDusters Ltd. | 1975/01/01 | 2003/12/31 | |
| J. Brooks | 1975/01/01 | 1977/12/31 | |
| Frank Taylor | 1975/01/01 | 2003/12/31 | |

## General Location

This property is located on Duncan Creek, between 2 km and 7 km from the confluence of Duncan Creek and Mayo River.

## Location Details

| Date: | Latitude Deg : Min : Sec | | | Longitude Deg : Min : Sec | | | Elevation (feet) | Distance from Mouth (feet) |
|---|---|---|---|---|---|---|---|---|
| 2003/01/01 | 63 | 47 | 57 | 135 | 29 | 45 | | |
| 2002/05/29 | 63 | 47 | 55 | 135 | 29 | 39 | 2,306 | 16,400 |
| 1998/01/01 | 63 | 49 | 0 | 135 | 29 | 0 | | |
| 1995/01/01 | 63 | 48 | 35 | 135 | 28 | 55 | 2,550 | |
| 1994/01/02 | 63 | 44 | 0 | 135 | 28 | 0 | | |
| 1994/01/01 | 63 | 48 | 0 | 135 | 28 | 0 | | |
| 1993/01/01 | 63 | 48 | 80 | 135 | 28 | 12 | 2,500 | |
| 1991/01/01 | 63 | 47 | 0 | 135 | 28 | 0 | | |
| 1990/01/01 | 63 | 48 | 58 | 135 | 28 | 34 | 3,000 | 19,600 |
| 1988/01/01 | 63 | 48 | 40 | 135 | 28 | 41 | | |
| 1987/01/01 | 63 | 48 | 44 | 135 | 28 | 47 | | |
| 1983/01/01 | 63 | 49 | 8 | 135 | 28 | 34 | 2,520 | |
| 1978/01/01 | 63 | 48 | 0 | 135 | 29 | 0 | | |
| 1975/01/01 | 63 | 52 | 0 | 135 | 27 | 0 | 2,000 | 5,000 |

## Water Licence(s)

| Number | Comments |
|---|---|
| PM86-138 | |
| PM91-107 | |
| PM90-060 | |
| PM94-093 | Expiry Date 3/31/15, Class Number IV, Effluent Standard 5.0 ml/L, Status A |

## Claims

| File Date | Number | Name | Status |
|---|---|---|---|
| | P 3677 | | |
| | P 2176 | | |
| | P 2166 | | |

## Work History

In 1975, Frank Taylor held five claims on lower Duncan Creek approximately 1 1/2 miles above the mouth; the ground being held since 1960. He added a 1-mile lease below the claims. Mr. Brooks held a 1-mile lease above the claims. Mining started on the second lowest claim, and together, these operators put in 3 left limit cuts, each 230 feet long by 55 feet wide. Numerous boulders up to 6 feet in diameter complicated the mining in this area. A total of 11,000 cubic yards were sluiced.
Mr. Taylor and Mr. Brooks mined on the upper part of Claim No. 2 and the lower part of Claim No. 3 in 1976. Left limit cuts 60 to 120 feet wide averaging 7 feet deep totalling 600 feet along the creek were made.
The 1977 season saw Mr. Taylor and Mr. Brooks mining on Claims No. 3 and 4, advancing upstream from previous workings. Three left limit cuts were put in, each approximately 15,000 cubic yards.
During 1978, Mr. Taylor mined approximately 12,000 cubic yards from a cut 150 feet wide along the left limit and centre of the valley.
Mr. Taylor mined two cuts in 1979 to 1980 totalling 35,000 bedrock square feet in area along the left limit of the creek.
In 1981, Mr. Taylor mined approximately 16,500 cubic yards of material.
Mr. Taylor mined 35,000 cubic yards of material and made modifications to the sluice box in 1982.
In 1983 and 1984, Mr. Taylor continued mining. He replaced the processing plant in 1984.
During the 1987 season, Mr. Taylor processed approximately 60,000 cubic yards from cuts along the right limit of the creek.
In 1988, Mr. Taylor proceeded upstream from the cuts mined the previous year, but switched over to the left limit of the creek. 34,000 cubic yards of material were stripped mechanically and 14,000 cubic yards were stripped using the creek. Approximately 60,000 cubic yards of material were processed.
In 1989, mining proceeded upstream from the last cut made in 1988, on the left limit but switched to the right limit as bedrock dropped off rapidly. One 12 hour shift was worked by the Taylors and two to five additional mine workers. Due to the conditions in the bedrock drain, much of the settling occurred prior to the effluent entering the out of stream ponds. Approximately 100,000 cubic yards of material were stripped mechanically, and 15,000 cubic yards were stripped hydraulically. The sluice plant was moved upstream as mining progressed. Approximately 45,000 cubic yards were sluiced.
Approximately 80,000 cubic yards were sluiced and 120,000 cubic yards were stripped in 1990.
During 1991, approximately 80,000 cubic yards were sluiced and 50,000 cubic yards were stripped.
Approximately 100,000 cubic yards were sluiced and 65,000 cubic yards were stripped during the 1992 season.
In 1993, about 100,000 cubic yards were sluiced and 8,500 cubic yards were stripped.
About 90,000 cubic yards were sluiced and 42,000 cubic yards stripped in 1994.
From 1995 to 1997, the Taylors worked 11 1/2 hour shifts with 2 to 5 additional workers. In 1995, one cut plus a fraction of another were mined for a total of 100,000 cubic yards sluiced. In 1997, one cut was mined and over 100,000 cubic yards sluiced. The cubic yards measured are bank yards not loose yards. Overburden was stripped off and stockpiled mechanically. The 1997 cut contained a shaft that was sunk to bedrock. Other oldtimer's shafts are nearby.
1998-2002 - Frank Taylor and his family continued mining upstream of camp during 1998 and 1999 in largescale stripping programs to access pay gravels that increased in depth, as the operation moved downstream, combined with an angled bedrock increasing in depth on the right limit. The depths combined with drain issues and cost increases forced the operation to downsize significantly during 1999 and 2000. In 2001, this operation reduced to a

father-son operation working known shallow areas downstream of camp looking for a more economical pay channel. Two 12-hour shifts were worked with up to eight mine employees during 1998 and 1999, which was reduced to two mine workers working 12 to 14-hour shifts for the 2001 and 2002 seasons. In 1998, four mining cuts totalling 90,466 banked cubic yards were completed, finishing in frozen clay at the northern end of the mining cut. The 1999 season was a downsizing year which started with a single 50,000 banked cubic yard mining cut above the canyon followed with five mining cuts totalling another 50,000 banked cubic yards located below the canyon. During 2000, 13 smaller mining cuts were worked below the canyon in much shallower gravels totalling 83,700 banked cubic yards. Reclamation work was done over the past three seasons. In the early part of 2001, 11,000 banked cubic yards were mined in three
consecutive mining cuts later in the season below the canyon with stripping completed for the 2002 mining season. The 2002 season had six sequential mining cuts on the right limit of Duncan Creek, totalling 60,000 banked cubic yards of stripping with an estimated 34,000 banked cubic yards being sluiced. The mining cut depth was reaching 100 feet by the end of 2002. Mining progressed in 2003 on the left limit of Duncan Creek in shallower bedrock bench deposits immediately below camp.

## Production

| Year | Stripped | Sluiced |
|---|---|---|
| 2002 | 60000 cubic yards | 34000 cubic yards |
| 2001 | Unknown | 11000 cubic yards |
| 2000 | Unknown | 83700 cubic yards |
| 1998 | Unknown | 90466 cubic yards |
| 1997 | Unknown | 100000 cubic yards |
| 1995 | Unknown | 100000 cubic yards |
| 1994 | 42000 cubic yards | 90000 cubic yards |
| 1993 | 8500 cubic yards | 100000 cubic yards |
| 1992 | 65000 cubic yards | 100000 cubic yards |
| 1991 | 50000 cubic yards | 80000 cubic yards |
| 1990 | 120000 cubic yards | 80000 cubic yards |
| 1989 | 115000 cubic yards | 45000 cubic yards |
| 1988 | Unknown | 60000 cubic yards |
| 1987 | Unknown | 60000 cubic yards |
| 1982 | Unknown | 35000 cubic yards |
| 1981 | Unknown | 16500 cubic yards |
| 1979 | Unknown | 35000 bedrock square feet |
| 1978 | Unknown | 12000 cubic yards |
| 1977 | Unknown | 15000 cubic yards |
| 1975 | Unknown | 11000 cubic yards |

## Equipment

In 1975, a 3 1/2 cubic yard Michigan front-end loader was used to feed the sluice box. This equipment remained the same in 1976 and 1977.
In 1978, a 3 1/2 yard Michigan front-end loader fed a grizzly with 6-inch square openings over the dump box. Larger boulders are stacked or pushed aside when the pay gravels are picked up. In 1980, a D8 Caterpillar bulldozer and a Michigan 125B loader were used. In 1982, a pump to spray water over the material as it passed over the grizzly, and a punch plate over expanded metal in the dump box were installed. In 1983, a Caterpillar 988B loader was added. This loader, along with the Michigan loader removed tailings and piled them in a large

berm between the tailrace from the sluicing plant, and the drain from the pit. The berm was then leveled to form the access road from the camp to the pit.
In 1983, the sluicing plant consisted of a wet grizzly, a dump box 8 feet wide and 16 feet long, and a single run sluice box 4 feet wide and 20 feet long. Material for sluicing was dumped over the grizzly, and washed by water provided to the spray bar by a small pump. Material less than 6 inches in diameter fell into the dump box, which was lined with punch plate over expanded metal, and was washed into the single run sluice box, which was lined with riffles, expanded metal, and mats. The sluice box was set at a gradient of 1 3/4 inches to the foot. Water for sluicing was diverted through a ditch from Duncan Creek, and gravity-fed to the sluice box. Effluent was settled in a series of settling ponds approximately 3,500 feet downstream from the sluice box.
In 1984, a new sluicing plant was installed, which was originally designed by Nugget Drilling. The sluicing plant consisted of a high dump box with a wire cable grizzly, and twin sluice runs. The grizzly diverted material coarser than 3 inches in diameter to the sides of the sluice box. Water from a spray bar washed the material as it passed over the grizzly. Material less than 3 inches in diameter went into the sluice runs, which were each 3 feet wide and 40 feet long. All but the last 6 feet of the runs was lined with 1 1/2 or 2-inch riffles. A hydraulic system run by a 111 hp diesel engine provided power for the pulsating riffles, and for a 10 by 12 inch pump. The mobility provided by the easily moved sluicing plant caused a basic change in the operating method from that used the previous year. The sluicing plant was moved back and forth across the face of the cut, taking the face back about 30 feet with each pass. The sluice was picked up at each end of the cut with the loader and hoe, and moved with all hydraulic hose lines in place. The distance moved was rarely more than 50 feet. The hoe was able to feed the box from either side at a rate of 100 to 120 cubic yards per hour. Tailings were stacked with the Caterpillar 988B loader. Effluent from sluicing was settled in a large new settling pond downstream of the old ponds, which had filled up.
In 1987, A Caterpillar D8H bulldozer was used to strip the ground. A Hitachi UH30 tracked excavator with a 4.5 cubic yard bucket was used to feed the box. A Caterpillar 988 loader with a 7 cubic yard bucket removed tailings. A 17 cubic yard Volvo 5350 rock truck was used to haul overburden, tailings and to move equipment. Tailings were used to build a berm for an effluent drain and for road building. The wash plant consisted of a 10 by 12 foot dump box, wet grizzly, and a three run sluice box. The centre run was 3 feet wide and consisted of 6 feet of slotted punch plate, followed by 10 feet of Hungarian riffles. The two side runs were 16 feet long and 3 feet wide, and were lined with 1 by 2 inch expanded metal over Nomad matting. Material less than 5 1/2 inch in size fell through the grizzly and passed over the centre run. Material smaller than 5/8 inch passed through slotted punch plate in the centre run and travelled through the side runs. The processing rate varied from 120 to 160 loose cubic yards per hour. A small jig and long tom measuring 3.5 feet by 6 feet was used to clean the concentrate from the sluice box. The gold was then refined into Dore bars on site. A Paco 10 pumped water directly out of the creek at a rate of 1,600 igpm to the sluice box and spray bar by 8-inch pump, powered by a Deutz diesel engine. Effluent was treated in two out of stream ponds located 1.5 miles downstream in Haggart Creek.
In 1988, water was pumped out of a suction pond into a diversion channel at a rate of 2,600 igpm. The diversion channel was equipped with a culvert and hand operated gate. A Gorman-Rupp 10 by 10-inch slurry pump, powered by a Caterpillar 3306 diesel supplied water. Effluent was treated in one out of stream settling pond located about 1500 feet downstream of the wash plant. The height of the settling pond dam was increased when more capacity was required.
In 1989, the same equipment and wash plant were used.
In 1993, effluent was treated in old cuts and a new pond was built across from the camp in 1994.
In 1995-1997, the equipment used at the mine consisted of two Hitachi UH30 excavators with 5 yard buckets, a D8H bulldozer with ripper, a 988B Caterpillar loader with a 7 yard bucket and 3 Caterpillar 769C 35-ton rock trucks. The equipment was used primarily for stripping, hauling and digging pay dirt, loading and hauling tailings and building settling ponds. Material was fed into a modified, wet vibrating grizzly feeder, 4 by 17 feet long. A flume from the grizzly transported material to the screen deck. A nugget trap was used for the gravel discharged by the screen deck and only the 5/8-inch minus fraction entered the actual sluicing area. The sluicing area consisted of two 4-foot wide runs with 1-inch angle iron riffles. The material was then distributed to four 4-foot wide sluice

runs with expanded metal riffles. A 10 by 10 inch Gorman Rupp pump powered by a Caterpillar 3306 engine supplied water to the wash plant at a rate of 2000 igpm. Due to the conditions in the bedrock drain much of the settling occurred prior to the effluent entering the out-of-stream ponds.
1998-2002 - The operation downsized in 1999 and the mode of operation was changed requiring less equipment and fewer employees working shallower deposits. Three Caterpillar 769C rock trucks, two UH30 excavators, a 988B Caterpillar loader and a D-8H Caterpillar bulldozer were used in 1998 and 1999. By 2001, it was operating with the 988B Caterpillar loader, a D-8H Caterpillar bulldozer and
one of the original UH30 excavators. The operation switched to the loader from an excavator for processing pay gravels to the wash plant for the 2001 mining season but reverted to the use of a Caterpillar 330BL excavator in 2002. Material was fed into a modified, wet vibrating grizzly feeder which was 4 feet wide by 17 feet long. A flume from the grizzly transported material to the screen deck in
1998 and 1999. The screen deck was not utilized after 2000. A nugget trap was used for the gravel discharged by the screen deck and only the 5/8-inch minus fraction entered the actual sluicing area. The sluicing area consisted of two 6-foot wide by 8-foot long runs with 1-inch angle iron riffles which fanned through to four 4-foot wide by 16-foot long sluice runs with expanded metal riffles for 1998 and 1999. During 1999, a smaller sluice box was built making the operation more mobile. A 10-inch Gorman Rupp trash pump supplied water to the wash plant from Duncan Creek. Settling during 1998 and 1999 was done through established settling facilities located immediately downstream of the canyon, utilizing an out-of-stream drain. New settling facilities had to be constructed during the 2000 and 2001
season immediately downstream of the opened mining cuts.
In 2003 mining set-up utilized a partial recirculation system resulting in a much smaller effluent discharge from the settling ponds.

## Environmental Work

| Year | Reclamation Work |
|---|---|
| 2001 | The water channel and land-based reclamation for all mining activities since 1999 was completed for mining below the canyon. |

## Landforms

| Landform | Comments |
|---|---|
| Glaciofluvial Terrace | |
| Alluvial Valley | |

## Surficial Geology

Deposits consisted of two feet of frozen organic black muck, 1 to 2 feet of sand and medium sized gravel with boulders up to 3 feet in diameter and intermittent bands of frozen muck. In the mined creek sections boulders up to 3 ft are common in the pay gravel, comprising bouldery gravel, up to 7.6 m thick.
The valley is composed of glacial-fluvial deposits. Approximately 2 to 20 feet of frozen black muck overlay 10 to 90 feet of inorganic overburden, consisting of silt, sorted sands, gravel, and boulders up to five feet in diameter. Up to 40 feet of gravel and some bedrock were sluiced. The ground was stripped in advance and thawed naturally. In 1995 to 1997, the average total depth to bedrock was 50 feet. Overburden varied from as little as 5 feet thick to as much as 30 feet thick with the average depth being around 15 feet. Overburden consisted of seasonally frozen glaciolacustrine clay and till. The sluice section varied from as little as 20 feet thick to as much as 45 feet thick with an average of 25 feet. It comprised thawed gravels with boulders up to 8 feet in diameter. Iron and manganese staining was common. Mining occurred below the creek level. A sharp relief in the bedrock defined the channel. The pay channel varied in width from 35 to 90 feet.
In 1998-2002 significant differences in ground profiles exist, with 45 to 120 feet of overburden in the 1998 and 1999 mining seasons for operations upstream of the bedrock canyon, to zero to 20 feet of overburden in the 2000 and 2001 mining seasons downstream of the canyon. In a similar manner the pay gravels varied from 2 to 30 feet thick in the 1998 and 1999 mining cuts, but was found to be 10 feet thick with coarse boulders in the 2000 and

2001 mining seasons below the canyon. The pay gravels were found to be thicker in 2002, ranging from 12 feet to 30 feet.

### Bedrock Geology

Bedrock is decomposed schist and siliceous schist.

### Gold Comments

Fineness ranges from 788 to 800; most of the gold was smaller than 12 mesh, two thirds is plus 25 mesh. Most of the gold ranged between -10 to +60 mesh size. Generally the gold was thin, flat and fairly smooth. A few nuggets were recovered. The colour of the gold is usually bright but some of it is stained. The coarser gold is reported to have a higher fineness.
In 1998-2002 the grain size of the gold was variable but nuggets were thin, flat and fairly smooth. Fineness ranged between 760 and 820. The 2001 and 2002 seasons produced 85% size 14 Tyler sieve screen or smaller gold.

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### Pictures

**Title:** Duncan Creek GoldDusters, 1998

**Notes:**

**Title:** Duncan Creek GoldDusters, 2002

**Notes:**