

# Yukon Placer Database Operations Report



Field Name: McMahan, 1996, 1999-2003

Last Update: 16-Feb-2005

Status: Active Producer

Stream: Hunker: a tributary of Klondike

Map Sheet(s): 1150/15

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## Operators

Name	From (Date)	To (Date)	Comment
Tom McMahan	1999/01/01	2003/12/31	
Tom McMahan	1996/01/01	1996/12/31	

## Owners

Name	From (Date)	To (Date)	Comment
Tom McMahan	1999/01/01	2003/12/31	
Tom McMahan	1996/01/01	1996/12/31	

## General Location

This operation was located on the right limit of the right fork of Hunker Creek. The mine site was near the headwaters of Hunker Creek and lack of surface run-off was sometimes an issue.

## Location Details

Date:	Latitude Deg : Min : Sec	Longitude Deg : Min : Sec	Elevation (feet)	Distance from Mouth (feet)
2005/01/01	63 53 24	138 55 18		
2003/01/01	63 52 0	138 59 0		
1998/01/01	63 51 0	138 54 0		
1996/01/01	63 53 0	138 55 0		

## Water Licence(s)

Number	Comments
PM01-223	Expires: 2004/11/01
PM99-021	
PM95-094	McMahan operated under the White Industries Ltd. Water Use Licence

## Work History

Tom McMahan began a small scale operation by himself in 1996. A small cut was sluiced along the right limit, but no further activity occurred until 1998. A single employee helped out when needed during sluicing a cut 250 feet long by 30 feet wide. Three cuts measuring 250 feet long by 36 feet wide/250 feet long by 40 feet wide/250 feet long by 12 feet wide were sluiced during the 2000 season. McMahan continued stripping along the right limit upstream from the previous year's pit in 2002 and 2003.

## Equipment

A Caterpillar 225 excavator did all the work including stripping, feeding the wash plant and handling tailings. A 3 1/2 foot trommel was used to classify the pay to 1/2 inch minus before being sluiced through a single 6 foot by 5 1/2 foot sluice run. The upper 2 feet used 1 inch angle iron riffles and the lower 3 1/2 feet used expanded metal. The run was lined with unbacked Nomad matting. A 5 inch Ajax pump powered by an Izuzu engine supplied the 500 igpm needed to process a maximum of 50 cubic yards per hour. Water shortages are a problems at this site because the mine is located near the top of the watershed. All surface run-off was channelled into an in-stream recycle pond where it was pumped to the sluice plant. The effluent was settled on an out-of-stream pre-settling pond prior to being discharged back into the recycle pond. The creek was dry for part of the summer and small sources of water from underground springs were used for make-up water.

In 1998-2001, a Gradall backhoe was used for stripping, feeding the wash plant, handling tailings, constructing

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drains and the construction and maintenance of settling facilities. A New Zealand style wash plant was used. A hopper feeds pay into a 3½ foot diameter by 12 foot long trommel. Eight feet of ½ inch screen classifies the pay gravels before being sluiced. The ½ inch minus pay passes over two boil boxes before being sluiced through a single sluice run 6 feet wide by 5 feet long. Hydraulic riffles were used. A 5 inch high pressure pump powered by a 4 cylinder Isuzu engine supplied the 600 igpm needed to process approximately 40 cubic yards per hour. Due to the small watershed above this operation water shortages have been a problem over the years. During 1999 springs exposed during stripping provided make-up water for the two out of stream pump pond/settling ponds. By the fall of 1999 and throughout 2000 the water in the right fork of Hunker Creek was turned into the full recycle system. Generally no direct discharge occurred. The same sluicing set up was in place with out of stream settling along the right limit with a by-pass channel in 2003.

### **Landforms**

<b>Landform</b>	<b>Comments</b>
Alluvial Valley	

### **Surficial Geology**

The Hunker Creek Valley is narrow and has steep hillsides. The ground mined in 1996 averaged 20 feet deep with 14 feet of frozen black muck overlying 4 feet of gravel. All of the gravels and up to 1 foot of bedrock was sluiced. In 1998, the ground along the right limit varied in depth from 15 to 20 feet deep. The ground was mixed up from previous activities likely from old timers at the turn of the century. Approximately 5 feet of mixed black muck and slide rock overlies a maximum of 4 feet of gravel. All of the gravels and up to 2 feet of the bedrock was sluiced.

### **Bedrock Geology**

Bedrock varies from solid and fractured to fully decomposed. The rocks along the upper part of Hunker Creek consist of the light coloured sericite schists, and the greenish chloritic schists of the Klondike series, cut by a few small bosses of rhyolite. From Colorado Creek to the mouth the same rocks also occur, but are associated with wide bands of the lead coloured and dark graphitic schists of the Hunker series, some green schists and occasional bands of limestone.

### **Gold Comments**

The gold was screened to approximately 30% +12 mesh, 15% -12 to +15 mesh and 50% -15 +35 mesh in 1996. Most of the gold was rough and many of the small nuggets contained quartz. Some loose mercury was recovered during sluicing and clean-up. The fineness of the gold varied from 790 to 820. In 1998, the gold was reported to be a mixture of both fine and coarse. It was screened to 10% +4 mesh, 30% -4 to +20 mesh, 60% -20 mesh. Most of the gold was rough, dull in colour and many of the small nuggets contained quartz; purity was 800 fine.

### **References**

Mining Inspection Division, Yukon Region. Yukon Placer Mining Industry 1995, 1996, 1997. Department of Indian Affairs and Northern Development, Whitehorse, Yukon, 1998.: p. 64-65

Mining Inspection Division, Yukon Region. Yukon Placer Mining Industry 1998-2002. Department of Indian Affairs and Northern Development, Whitehorse, Yukon, 2003.: p. 86

Nowosad, M. Placer Mining Year End Summary, 2003. Client Services and Inspections Division, Yukon Energy Mines and Resources, 2004.: p. 79

Thomson, R.F. Placer Mining Year End Summary, 2002. Mining Inspection Division, DIAND, 2003.: p. 70

### **Pictures**

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**Title:** Thomas McMahon, Right Fork, Hunker Creek

**Notes:**

