

# Yukon Placer Database Operations Report



**Field Name:** Kruger, 1975-1984, 1988-2003

**Last Update:** 17-Feb-2005

**Status:** Active Producer

**Stream:** Sulphur: a tributary of Dominion

**Map Sheet(s):** 1150/10, 1150/15

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## Operators

Name	From (Date)	To (Date)	Comment
Henry Kruger	1988/01/01	2003/12/31	
Henry Kruger	1978/01/01	1984/12/31	
J. Kruger	1975/01/01	1977/12/31	

## Owners

Name	From (Date)	To (Date)	Comment
Henry Kruger	1988/01/01	2003/12/31	
Henry Kruger	1978/01/01	1984/12/31	
J. Kruger	1975/01/01	1977/12/31	

## General Location

In 1978, the property was situated along the right limit of Sulphur Creek, approximately 8.6 km (5.4 miles) upstream from its confluence with Dominion Creek. In 1983, the property was located along the right limit of the creek, approximately 5.5 miles upstream from its confluence with Dominion Creek. In 1988, the operation was located approximately 2 miles upstream from its junction with Dominion Creek. In 1998, Mr. Kruger continued his one man operation on the right limit of Sulphur Creek Valley.

## Location Details

Date:	Latitude			Longitude			Elevation (feet)	Distance from Mouth (feet)
	Deg	Min	Sec	Deg	Min	Sec		
2003/01/01	63	41	19	138	44	28		
1998/01/01	63	42	0	138	42	0		
1995/01/01	63	42	0	138	48	0		
1993/01/01	63	41	2	138	45	0	2,000	
1991/01/01	63	50	0	138	56	0		
1989/01/01	63	42	0	138	47	0		
1988/01/01	63	40	0	138	43	0		
1983/01/01	63	42	0	138	47	0		
1977/01/01	63	43	0	138	54	0		

## Water Licence(s)

Number	Comments
PM03-307	Mining land use expires October 31, 2004.
LP00123	
PM96-056	In 1995 and 1996 mining was performed under water Licence number OM93-088. PM96-063 was a renewal of that licence.
PM90-077	
PM86-154	
PM93-088	

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1975- Mr. J. Kruger began placer prospecting.

1976- Mr. Kruger brought in equipment for mining.

1977- Mr. Kruger holds 6 claims on lower Sulphur Creek in 1,500 feet on a right limit pup. Adjacent to his test cut, Kruger has put down a shaft 35 feet into the bedrock.

1978- Mr. H. Kruger stripped and mined a cut of 350 square metres (3,750 square feet).

1979- Mr. H. Kruger stripped and mined a cut of 450 square metres (4,850 square feet).

1980- Mr. H. Kruger enlarged the previous year's cut by 2,450 square metres (26,400 square feet).

1981-1982- Mr. H. Kruger continued mining, but no production figures were given.

1983-1984- Mr. Kruger continued to mine the property, but no production figures were given.

1988- An area of approximately 250 by 100 feet was mined for an excavation of approximately 38,000 cubic yards, yielding roughly 25,000 cubic yards of pay gravel. Tailings were deposited into mine cuts from previous years. Seepage from Sulphur Creek fills the older part of the large cut which had been previously mined. This served as an out of stream reservoir for sluicing. Effluent from the sluice box was pumped to an area of old tailings ponds from historic dredging operations.

1989-1990- A single cut 20 feet wide by 150 feet long was stripped and sluiced. A larger cut, 60 feet wide by 150 feet long, was mined the following year.

1991-1992- Stripping was done by a D7E bulldozer, which also pushed up pay.

1993-1994- This was a one person operation. In each 1993 and 1994 one cut 150 feet wide by 150 feet long by 30 feet was mined.

1995- This operation continued as a one person operation working a single 8 hour shift. 13,000 cubic yards were sluiced. The area stripped was 150 feet by 150 feet.

1996- Two areas were stripped, one was a continuation of the area mined in 1995. The area was 150 by 150 by 15 feet. Another 13,000 cubic yards were sluiced. Stripping started on an area upstream from Mr. Kruger's old camp site. The preparatory stripping accomplished in the upstream area was 300 feet long by 150 feet wide by 4 feet deep.

1997- Mr. Kruger sluiced approximately 3000 cubic yards each from the upstream and downstream areas.

1998-2002- They worked an 8 hour shift daily. Mr. Kruger excavated one mine cut per year, all of which were approximately 150 by 150 feet to bedrock. His most recent location was between the dredge tailings and cutting into the far right bench.

2003 - Sluicing commenced near the end of June this season. Work was done on the right limit black muck hache.

**Production**

<b>Year</b>	<b>Stripped</b>	<b>Sluiced</b>
1997	Unknown	6000 cubic yards
1996	Unknown	13000 cubic yards
1995	22500 square feet	13000 cubic yards
1994	Unknown	675000 cubic feet
1993	Unknown	675000 cubic feet
1990	9000 square feet	9000 square feet
1989	3000 square feet	3000 square feet
1988	38000 cubic yards	25000 cubic yards
1979	450 square metres	450 square metres
1978	350 square metres	350 square metres

**Equipment**

In 1977, and Model 955 tracked loader and a D7E Caterpillar bulldozer were used to mine.

In 1978, a dragline with a 1.3 cubic meter (1.75 cubic yard) capacity was used.

A single channel sluice box used in 1978, and 1979 was modified in 1980, by adding undercurrents to each side.

In 1983, a Hough 120 loader equipped with a 6 cubic yard bucket, a Caterpillar D7E bulldozer, a Caterpillar 955 Trax excavator, and a 605 dragline were used. The loader and the bulldozer were used to strip overburden. The 605 dragline was used to do ditching work, and to mine and stockpile pay gravel. The Traxcavator was used to feed the sluicing plant, which consisted of a dump box and a 3 run sluice box. The main sluice run was 36 inches wide and 36 feet long, and was lined with 3-inch riffles and coco matting. The side runs were 48 inches wide and 20 feet long, and were lined with expanded metal and coco matting. Material was processed at a rate of 30 to 50 cubic yards per hour. Water used for sluicing consisted only of seepage water pumped from the cut by a 6-inch pump powered by a Ford industrial gas engine. A shortage of water was reported to be common.

In 1984, additional water for sluicing was pumped from Sulphur Creek by a 6 by 6 inch Monarch pump run by a 240 Ford engine. Sluice water was returned by a ditch upstream and by seepage to the pump for recirculation. A D7E bulldozer was used to strip thawed ground and to loosen gravel for a 120C Hough loader, which hauled pay to the wash plant and removed tailings. A 955 Caterpillar loader was used for lifting and miscellaneous jobs. A Koehring 605 dragline maintained the drainage ditch. Mr. Kruger sluiced for 3 to 4 hours each day, using partially recycled water. Settling of effluent was accomplished using a 200-foot by 100-foot pre-settling pond, which discharged to a ditch that carried the effluent across Sulphur Creek in an overhead pipeline to a final out-of-stream settling area in old dredge tailings. The wash plant was a triple run sluice with a 13-foot by 8-foot dump box tapered down to the neck in the last 3 to 4 feet. The center run was 2.5 feet wide by 24 feet long with .5 inch punch plate, 1.5 inch expanded metal, and coco matting. The side runs were three feet in width for the first five feet, and widened to four feet for the last 19 feet. The side runs were also lined with expanded metal and cocoa matting. An 8 by 10 inch pump powered by a 671 GM engine provided 2,500 igpm to the plant to process 50 loose yards per hour.

In 1989, the same heavy equipment was used. The wash plant consisted of a dump box feeding a three run sluice box. A 13-foot wide by 8 feet long dump box narrows down to a 3-foot neck. The lower section of the dump box is lined with 1/2 inch punch plate with 2 by 4 splitters to channel any minus 1/2 inch pay into a side run on each side of the main run. An H-beam is suspended in the sump box to hold back muck to ensure it gets adequately washed. The center run measures 3 feet wide by 24 feet long. Coco matting, double expanded metal and 1/2-inch punch plate line the entire run. The side runs increase in width from 3 to 4 feet near the top and are 24 feet long. Coco matting and double expanded metal are used in the side runs. Production is estimated to be 50 cubic yards per hour. Between 1,500 and 2,000 igpm are needed for sluicing. The settling facilities have been built out of old dredge tailings, and outflow is by seepage only.

In 1993, a D9G Caterpillar bulldozer was used to strip and move tailings. A D7E bulldozer was used to strip thawed ground and to loosen gravel for a 120C Hough loader, which hauled pay to the wash plant and removed tailings.

In 1995, Mr. Kruger used a model D7 and model D9 Caterpillar bulldozers to strip ground. A model 605 Koehring dragline was used to dig drains and to hoist material out of the pit. A model 120C Hough loader was used to feed the sluice plant. The D9 bulldozer was used the most of the two bulldozers. The wash plant used a variation of a Ross box. It had a 15 cubic yard dump box, 13 feet by 8 feet tapering to 4 feet. The center run was 3 feet wide by 24 feet long with approximately 2 feet of the width available for recovery. The two side runs were 4 feet wide by 24 feet long. The dump box was equipped with 1/2-inch punch plate. The center run was equipped with punch plate 1 1/2 inches above expanded metal over the whole length and with Nomad matting in the first few feet. In 1996 the configuration of the center run was changed to punch over the whole length, 1 1/2 inches above riffles in the first 5 or 6 feet and then expanded metal over the remainder of the length. From 50 to 60 loose yards of gravel were processed through the plant each hour. Water was provided using an 8-inch pump powered by a 6-71 GM pump. Water used by this operation was seepage water pumped from cuts. Effluent was settled in primary ponds on site and in dredge tailings downstream areas.

In 1998, the same equipment was used as in previous years. In 1999, Mr. Kruger switched from using his Ross-type box to a 5 by 16 foot El-Russ screen deck. The 4 by 6 foot deck fed into a distribution box divided into two 4

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by 15 foot sluice runs. The first 2 feet of run had 1 inch riffles while the remainder was expanded metal. An 8 inch Murphy pump, powered by a 6-71 General Motors diesel provided 2500 igpm. About 50 cubic yards was processed per hour. The 2001 mine cut was composed of larger, boulder-type material which caused some problems for the operator. This is an out of stream operation, acquiring water from Sulphur Creek and groundwater seepage into old mine cuts used as reservoirs or to settle effluent. Mr. Kruger, an excellent metal worker, applied his ingenuity to construct a double-walled mobile tank creating an easy-to-move, impervious secondary containment for fuel storage greater than 4000 litres. In 2003 the operation was well out of stream with no surface discharge. Clean water was acquired from Lucky Lady Placers for sluicing.

### **Landforms**

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

### **Surficial Geology**

At the site mined in 1978, deposits are 9.1 to 9.8 meters (30 to 32 feet) thick, and consist of 3 to 4.9 meters (10 to 16 feet) of black muck with abundant tree remains, overlying 1.2 to 3 meters (4 to 10 feet) of sand with some bouldery sections, 1.2 meters (4 feet) of barren brown gravel, and 2.4 meters (8 feet) of gold-bearing quartz-rich gravel analogous to the White Channel gravel of Hunker and Bonanza Creeks. The deposits lie adjacent to tailings from former dredging operations. At the site mined in 1989, the stratigraphic section averaged 35 feet though frozen material to bedrock. A 14-foot layer of black muck overlies 21 feet of gavel. Bedrock tended to be decomposed. The upper gravels were poor in pay, but because enough gold was recovered to cover the costs of moving it, the entire gravel layer was sluiced along with 6 inches of bedrock.

In 1995, the depth of the material encountered by the operator at this site varied from 30 to 34 feet. This typically comprised a 15-foot muck layer over a 15-foot deep gravel layer. The sluice section consisted of the gravel layer as well as 1/2 to 1 foot of decomposed bedrock.

Overburden consisted of frozen black muck to a depth of 14 or 15 feet. Gravels averaged 14 to 15 feet as well, with bedrock somewhere between 28 and 30 feet. The sluiced section averaged around 12 feet of gravels and 1 foot of decomposed bedrock.

### **Bedrock Geology**

The bedrock tended to be decomposed. The rocks are principally of the light greyish and light greenish schists of the Klondike series. The schists are cut by numerous quartz veins and by occasional bosses and dykes of rhyolite. In the lower part of the valley the schists become coarser, more granular, and appear to change gradually to a granite gneiss, and near the mouth to granite.

### **Gold Comments**

In 1983, the gold recovered was fine and flaky in character, with very coarse particles. Fineness was between 810 and 830. In 1989, gold recovered was 820 fine.

In 1995 the gold recovered from this site was mostly very fine grained with a fineness of 810.

In 1998, the gold was very flaky with a fineness of about 820.

### **References**

Debicki R.L. Yukon Placer Mining Industry 1978-1982. Whitehorse: DIAND, 1983.: p. 138

Debicki R.L. Yukon Placer Mining Industry 1983-1984. Whitehorse: DIAND, 1986.: p. 132

LeBarge, W.P. and Morison, S.R. Yukon Placer Mining and Exploration 1985-1988; Exploration and Geological Services Division, Yukon, Indian and Northern Affairs Canada, 1990.: p. 72-73

Mining Inspection Division, Yukon Region. Yukon Placer Mining Industry 1995, 1996, 1997. Department of Indian Affairs and Northern Development, Whitehorse, Yukon, 1998.: p. 82-83

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### **References**

Mining Inspection Division, Yukon Region. Yukon Placer Mining Industry 1998-2002. Department of Indian Affairs and Northern Development, Whitehorse, Yukon, 2003.: p. 101

Morin, J.A. Mineral Industry Report 1977 Yukon Territory. EGS 1978-9, Ottawa: DIAND, 1979.: p. 102

Nowosad, M. Placer Mining Year End Summary, 2003. Client Services and Inspections Division, Yukon Energy Mines and Resources, 2004.: p. 68

Thomson, R.F. Placer Mining Year End Summary, 2002. Mining Inspection Division, DIAND, 2003.: p. 60

Thomson, R.F. Yukon Placer Mining Industry 1991-1992. Whitehorse: DIAND, 1993.: p. 70

van Kalsbeek L.P. Yukon Placer Mining Industry 1989-1990. Whitehorse: DIAND, 1991.: p. 36

van Kalsbeek L.P. Yukon Placer Mining Industry 1993-1994. Whitehorse: DIAND, 1996.: p. 36-37

### **Pictures**

**Title:** Henry Kruger sluicing on Sulpher Creek

**Notes:**

