

Yukon Placer Database Operations Report



Field Name: Archibald, 1978-2003

Last Update: 21-Feb-2005

Status: Active Producer

Stream: French Gulch: a tributary of Eldorado

Map Sheet(s): 1150/14

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Operators

Name	From (Date)	To (Date)	Comment
J. Archibald	1985/01/01	2003/12/31	

Owners

Name	From (Date)	To (Date)	Comment
J. Archibald	1985/01/01	2003/12/31	

General Location

In 1978, the property was situated along Eldorado Creek at, and just downstream from the mouth of French Gulch. In 1985, this operation was located on French Gulch, a left limit tributary of Eldorado Creek 1.5 miles upstream from Grand Forks.

From 1998 to 2002, the mining operation was located in the Eldorado Creek Valley, immediately downstream from the mouth of French Gulch.

In 2003 this operation continued on French Gulch.

Location Details

Date:	Latitude Deg : Min : Sec	Longitude Deg : Min : Sec	Elevation (feet)	Distance from Mouth (feet)
2003/01/01	63 53 49	139 18 33		
1995/01/01	63 53 0	139 20 0		
1985/01/01	63 53 0	139 20 0		
1978/01/01	63 54 0	139 19 0		

Water Licence(s)

Number	Comments
PM98-057	Expires: 2005/04/30
PM86-035	
PM95-076	
PM89-133	
PM92-069	

Work History

1978- The Archibald brothers moved to this location from Bonanza Creek. They dug a drain 450 metres (1,500 feet) long, and stripped and mined approximately 13,750 cubic metres (18,000 cubic yards) of material from a cut of 3,150 square metres (33,750 square feet). Bedrock was not reached.

1979- Approximately 19,100 cubic metres (25,000 cubic yards) of dredge tailings from Eldorado Creek and hydraulic tailings from French Hill were mined.

1980- Approximately 25,250 cubic metres (33,000 cubic yards) of material were mined. A reservoir on French Gulch which stored water for sluicing was enlarged.

1981- Approximately 15,300 cubic metres (20,000 cubic yards) of material were stripped, and equal amount of material was mined for sluicing. The water reservoir on French Gulch was enlarged further, and a settling pond 6 metres (20 feet) wide and 600 metres (2,000 feet) long was built in dredge tailings along the left limit of Eldorado Creek.

1982-1983- Mining continued, but no production figures were given.

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1984- Approximately 15,000 cubic yards of material were stripped and 30,000 cubic yards of material were sluiced.

1985- Mr. Archibald worked on the property alone.

1986- Mr. Archibald worked on the property with one other person.

1990- James Archibald mined alone on the property.

James Archibald has been placer mining in the Yukon for 30 years. He continued a one person operation in 1991. A mining cut on French Gulch claim 3, stripped of overburden in 1991, was mined in 1993. A mining cut on claim 3A was prepared in the fall of 1993 and mined in 1994. Mining cuts were located in the centre of the narrow valley bottom of French Gulch. Black muck overburden was mechanically stripped and stockpiled in the fall of each season.

1995- James Archibald mined claims 3 and 4 on French Gulch. Several cuts about 50 feet wide were sluiced.

1996- Mr. Archibald worked on the left limit at the mouth of French Gulch. One cut 500 by 50 feet was taken out by the base of French Hill.

1997- Mr. Archibald moved back onto claims 15 and 16 on Eldorado Creek, at the mouth of French Gulch, where he had left off in 1978. One cut about 500 by 80 feet was mined on Eldorado Creek at the mouth of French Gulch.

1998-2002 - Mining was conducted along the Eldorado Creek valley left limit below French Gulch from 1998 to 2001 by working cuts which varied from 50 to 80 feet wide by up to 500 feet long each year.

2003 - Mr. Archibald continued mining.

Equipment

In 1978, two D6B Caterpillar bulldozers were used.

In 1979, two D6 Caterpillar bulldozers, and a 980B loader were used to strip and mine the property. In 1980, just one of the D6's was used with the loader.

In 1983, Caterpillar D6B and D6C bulldozers, along with a Caterpillar 980B loader with a 5 cubic yard bucket were used. Material mined was sluiced in a single run sluice box 36 inches wide and 24 feet long without a classification system. Water for sluicing was pumped from a pond 60 feet wide and 200 feet long fed by French Gulch. Effluent from sluicing was directed into Eldorado Creek, which at this point was already laden with silt. The same equipment was used in 1984.

In 1985, a Caterpillar 980B loader was used primarily to feed the plant and haul tailings and one D6B Caterpillar bulldozer to strip overburden and stockpile pay for the loader. The washing plant consisted of a dump and single run sluice. The dump box measured 8 by 28 feet and was lined in part with 2-inch angle iron riffles. The sluice run, measuring 3 by 24 feet, was lined with 3-inch angle iron riffles. A Byron Jackson 10 pumped Wash water to the sluice at a rate of 2500 igpm by 12-inch pump, powered by a 671 Detroit diesel engine. The processing rate averaged 67 loose cubic yards per hour.

1986- A D8K Caterpillar bulldozer was added. The D8K stripped the ground, the D6B fed the plant, and the 980B hauled tailings.

In 1990, a Caterpillar D8K bulldozer was used to strip overburden. One Caterpillar 988B front-end loader was used to feed the sluice box, remove and stack tailings, and to clean out the settling ponds. One Caterpillar D6B bulldozer was used for pushing gravel and for feeding the sluice box. The wash plant was an 8 by 12 foot dump box and single run sluice 36 inches wide by 24 feet long. Standard angle iron riffles were used in the sluice and at the bottom end of the dump box. A 10 by 12 inch Byron-Jackson pump powered by a 671 Detroit Diesel engine delivered approximately 2,500 igpm, which was used to process approximately 70 cubic yards per hour. Water was stored in a reservoir in French Gulch and wastewater was contained in two, large, out-of-stream settling ponds between the mouth of French Gulch and Eldorado Creek. Discharge water from settling ponds flowed into French Gulch.

1991-1992-The settling ponds discharged into a drain entering Eldorado Creek just downstream from the mouth of French Gulch.

1993- One Caterpillar D8K bulldozer was used for stripping overburden and digging pay gravels. One Caterpillar 980B loader fed the wash plant and removed tailings. In 1993 the wash plant was an eight-foot dump box with a

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single sluice run 3 feet wide by 32 feet long. The grade was 2 inches in 12 feet, and 2 1/2 inch angle iron riffles were set at 17 degrees. Approximately 45 cubic yards per hour were processed using 2500 igpm of water supplied by a 10 by 12 inch Byron-Jackson pump, powered by a 671 Detroit Diesel.

Late in 1993 a 10 by 20 foot Derocker screening plant replaced the wash plant. The single sluice run was decreased to 24 feet long with the same grade and riffles. The rate of water use decreased to 1500 igpm, while the processing rate increased to 55 cubic yards per hour. An 8 by 10 inch Fairbanks-Morris pump supplied the Derocker. One instream reservoir on French Gulch stored enough water for three hours of sluicing per day. One large out-of-stream settling pond near the mouth of French Gulch was two acres in surface area. This pond was mechanically cleaned out at the end of each season using the front-end loader.

1998-2001- A Caterpillar D6C bulldozer was used for road building and maintenance, one Caterpillar D8K bulldozer was used for stripping and excavating, and one Caterpillar 980B front-end loader was used to feed the wash plant and to stack tailings. The Derocker screening plant was 10 by 20 feet with 2 1/2 inch openings. The single sluice run was 2 1/2 feet wide by 24 feet long with 2 1/2 inch angle iron riffles, set at 17 degrees, with a slope of 2 inches in 12 feet. Approximately 55 cubic yards per hour were sluiced. Water was supplied at a rate of about 1300 igpm by an 8 by 10 inch Fairbanks Morris pump powered by a 471 Detroit diesel engine. An instream reservoir dam, reinforced with broken bedrock, was located on French Gulch. Two large settling ponds with about 2 acres of surface area were located on Eldorado Creek Valley, at the mouth of French Gulch. These settling ponds were drained each fall and cleaned out using a front-end loader. Water was recycled within one large out of stream settling pond which had minimal seepage discharge.

Landforms

Landform	Comments
Tailings	
Gulch	

Surficial Geology

Deposits consist mainly of frozen tailings up to 10 metres (33 feet) thick from 1927 dredging operations. Some previously unworked ground is present along the left limit of the creek. Tailings from hydraulic mining operations on French Hill cover part of the area.

In 1985, the deposit mined was 21 feet deep and consisted of 13 feet of black muck with seams of silt and sand, over 8 feet of gravels.

Mining cuts were located in the centre of the narrow valley bottom of French Gulch. Black muck overburden was mechanically stripped and stockpiled in the fall of each season. Overburden contained sand and silt seams as well as prehistoric animal bones. Gravel layers varied from a few feet up to 10 or 12 feet deep. All gravels plus up to six feet of decomposed bedrock were sluiced.

(1991-1992) Overburden was removed from the two claims in the spring of 1991 by ground sluicing under a Site Specific Authorization issued by the Department of Fisheries and Oceans for two weeks only. The overburden was mostly black muck with no seams of sand or gravel. The black muck contained a high percentage of roots and trees with seams of moss, and it also contained a large amount of prehistoric animal bones.

(1993-1994) Mining cuts were located in the centre of the narrow valley bottom of French Gulch. Black muck overburden was mechanically stripped and stockpiled in the fall of each season. Overburden contained sand and silt seams as well as prehistoric animal bones.

1995- Approximately 1 kilometer up French Gulch the valley bottom is narrow and steep sided with organic overburden covering sand and silt layers; the bottom gravels varied from a few feet up to 12 feet deep. Overburden was stripped each fall in preparation for the next season. Near the mouth of French Gulch, on the left limit, the pay gravel was covered with up to 40 feet of hydraulic tailings from French Hill. Near the mouth of French Gulch, on the right limit, there was very little overburden and bedrock was close to the surface. On the Eldorado Creek claims, near the mouth of French Gulch there were dredge tailings on top of some pay gravels.

1998- The Eldorado Creek Valley below French Gulch was covered with old dredge tailing piles 20 to 30 feet

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deep. Residual pay gravel found below the dredge tailings and along the left limit of the valley varied in depth from a few feet up to a maximum of 15 feet deep near the rim.

Bedrock Geology

Bedrock is quartz-chlorite-sericite schist, and black carbonaceous pyritic schist. Parts of the quartz-chlorite-sericite schist are badly decomposed.

Gold Comments

In addition to gold, abundant pyrite, some magnetite, and limited amounts of botryoidal cassiterite ("wood tin") and barite are recovered from the deposits at this site in 1983.

In 1985, gold recovered was described as divided evenly between larger and smaller than 12 mesh, and was generally angular, with a fineness of 690.

In 1990, gold recovered was angular and coarse grained with 50% minus 12 mesh and a fineness of 690.

Fineness was 645 and 54% to 58% of the gold was larger than 12 mesh. The largest nugget found was 8.5 ounces and shaped like a bear. The fineness of gold from claim 2 was 667, and from claim 3 it was 645, indicating that the lode deposit of this gulch was farther upstream.

1995- Upstream in French Gulch the gold was coarse, with 60% larger than 12 mesh. Fineness was around 625.

Near the mouth of French Gulch within the hydraulic tailings, gold was mostly fine, almost all smaller than 16 mesh. Fineness was around 710. In Eldorado Creek the gold was chunkier, most of it was over 16 mesh. Fineness was around 760.

1998- Fine gold only was recovered from below the dredge tailings, all smaller than 16 mesh, with fineness around 710. Gold recovered from the side pay was coarser, mostly over 16 mesh, with fineness around 760.

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