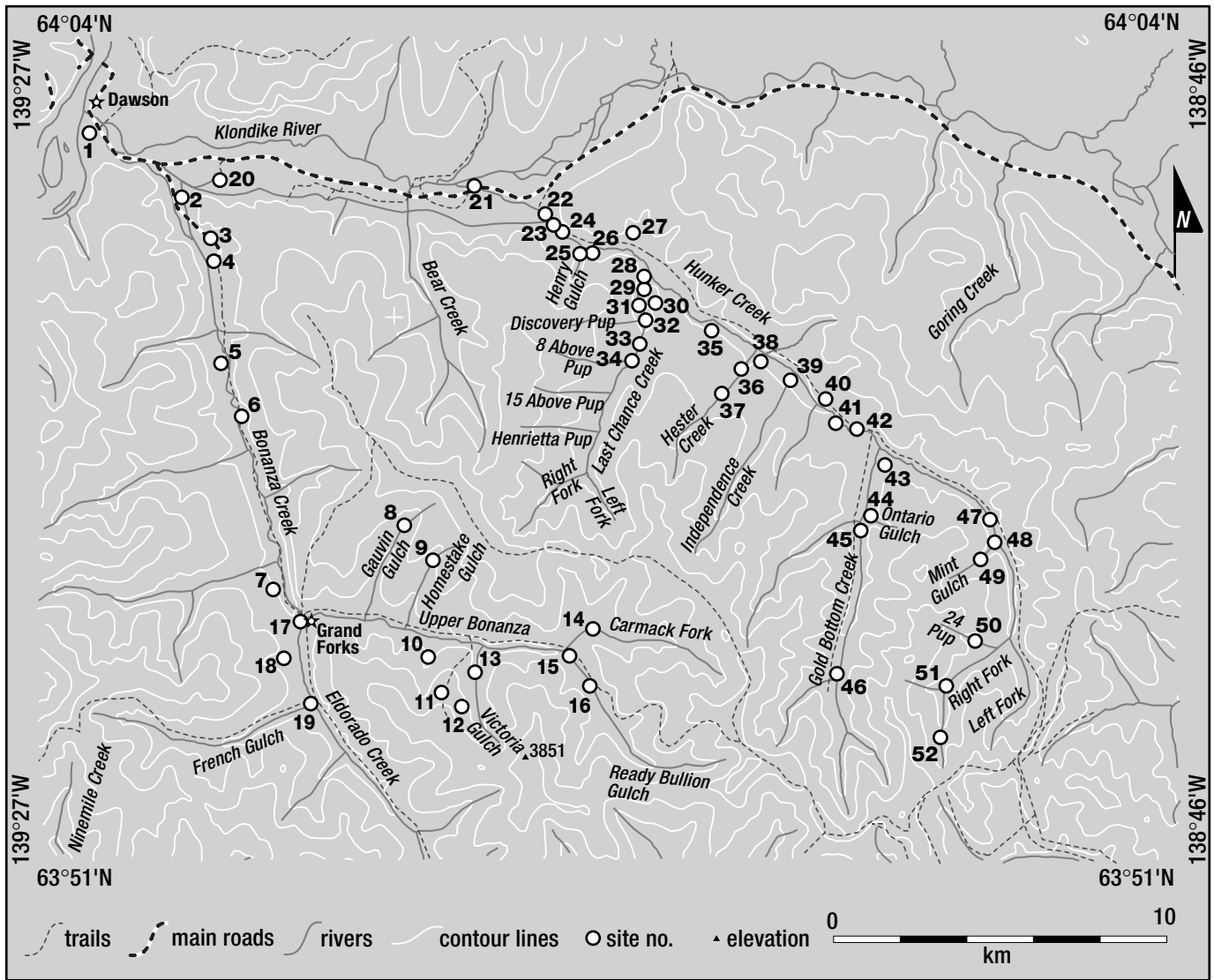


KLONDIKE: BONANZA-HUNKER PLACER AREA

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KLONDIKE RIVER	116B/3
Graham and Geoffrey Jacobs	64°02'N 139°25'W
Water Licence: PM99-081	1998, 1999, 2000
Bonanza-Hunker Placer Area	Site no. 1

OPERATION/LOCATION These brothers ran a two-person operation high on the Lousetown Bench above the Klondike River, about ½ kilometre upstream from its confluence with the Yukon River.

EQUIPMENT/FUNCTION One Caterpillar D9H bulldozer was used for stripping overburden and levelling tailings. An Hitachi UH07 excavator was used to dig pay gravels and load a Dodge 10-yard dump truck which hauled the gravel to a Kobelco 907 excavator used to feed the wash plant.

WASH PLANT A metal hopper fed to a 5- by 10-foot oscillating screen deck which classified pay gravels to ¾ inch. Two sluice runs were each 8 feet wide by 10 feet long with hydraulic riffles layering the first 4 feet. Tailings were removed and stacked by a 50-foot conveyor belt. A 5-inch water pump powered by a diesel engine recycled about 1200 igpm which was used to process approximately 80 yards per hour.

GROUND DESCRIPTION Two or 3 feet of organic soil overlay 10 to 20 feet of mixed mud and gravel on top of White Channel gravel which was 10 to 15 feet deep. All of the White Channel gravel plus 1 or 2 feet of broken bedrock were sluiced.

MINING CUTS In 1998, old mine tailings were mined from a cut about 50 feet wide by 1000 feet long. In 1999, a new cut, 150 feet wide by 2000 feet long, was mined. During 2000, two cuts were excavated, 150 feet by 500 feet and 30 feet by 600 feet.

WATER SUPPLY AND TREATMENT A 6-inch Ajax pump powered by a Deutz diesel engine supplied make-up water from the Klondike River via a 5-inch aluminum pipe up onto the bench where it was recycled in several large ponds located in old mining cuts. There was no discharge to any water course.

GOLD Only a few small flakes among mostly powder gold, with fineness between 800 and 830, was cleaned up using a gold wheel.

COMMENTS Upon mining was done, a very good job of reclamation at this site was completed, including the levelling and contouring of old mining and the accompanying cleanup.

BONANZA CREEK	116B/3
Michael Creaven	64°02'N 139°23'W
Water Licence: PM00-176	1998, 1999, 2000, 2001, 2002
Bonanza-Hunker Placer Area	Site no. 2

OPERATION/LOCATION Michael Creaven has been mining on the right limit near the mouth of the Bonanza Creek valley for eight years.

EQUIPMENT/FUNCTION A Case 580 excavator/loader was used to excavate pay gravel, feed the wash plant and remove tailings.

WASH PLANT A screen deck 4 feet by 8 feet classified material to ⅝-inch and fed into a 16-foot long single sluice run 1-foot wide with angle iron riffle.

GROUND DESCRIPTION Pay gravels continued to be mined from a 20-foot vertical face composed of alternating layers of black muck and gravel.

MINING CUTS Up to 1000 yards per season were excavated from mining cuts 20 to 40 feet long by 8 to 12 feet wide and 12 to 20 feet deep.

WATER SUPPLY AND TREATMENT Ground water seepage was recycled in out-of-stream ponds and in old mining cuts from previous operations in the area.

GOLD Gold was cleaned up using a micro concentrator and assayed around 800. It tended to be small, flat and dull coloured with no nuggets.

COMMENTS Michael Creaven noted that 2002 was the first year he had a decent cleanup, and consequently he would likely return.

BONANZA CREEK	116B/3
Clive Nicholson	64°01'N 139°22'W
Water Licence: PM97-037	1998, 1999, 2000, 2001, 2002
Bonanza-Hunker Placer Area	Site no. 3

OPERATION/LOCATION Clive Nicholson continued his three-person operation on the first tier bench of Lovett Gulch, a right limit tributary of Bonanza Creek, about 3 kilometres upstream from the Klondike River valley.

EQUIPMENT/FUNCTION A Caterpillar D9 bulldozer was used to strip overburden and excavate pay gravel. Two Caterpillar 627 belly scrapers were used to strip and stack overburden and waste gravel. One Caterpillar 920 loader was used to feed the wash plant.

WASH PLANT A large steel trommel, 7 feet in diameter by 40 feet long, fed a single sluice run, 4 feet wide by 30 feet long, with expanded metal riffles over Nomad matting. A 5-inch by 6-inch Paramount water pump, powered by a



Large trommel and dump box used by Clive Nicholson, set up among White Channel gravel tailings, near Lovett Gulch on Bonanza Creek.

Caterpillar 3304 diesel engine, provided 800 or 900 igpm which was used to sluice up to 100 cubic yards per hour, which was reduced to 60 cubic yards per hour in 2002.

GROUND DESCRIPTION White Channel tailings from the upper bench, up to 60 feet deep, were first stripped from on top of original frozen overburden, 35 feet to 45 feet deep. Frozen pay gravel was 6 to 10 feet deep, and all gravel plus 3 to 4 feet of bedrock were sluiced.

MINING CUTS In 1998 and 1999, about 200 feet by 200 feet were mined. In 2000 and 2001, larger cuts, about 400 feet by 200 feet, were mined each season. Between 30,000 and 40,000 cubic yards were sluiced each season and from 130,000 to 150,000 yards of overburden were stripped each year. A larger excavation was made in 2002, 400 by 200 feet, totalling 250,000 cubic yards of material that was stripped and sluiced.

WATER SUPPLY AND TREATMENT Water was recycled out-of-stream, within two abandoned mining cuts which have filled with seepage water.

GOLD Gold was flat and dull coloured with fineness around 795.

COMMENTS Mammoth tusks and bones were found in overburden and in frozen gravel.

BONANZA CREEK

116B/3

Tim Coles 64°01'N 139°21'W
Water Licence: PM00-201 2001, 2002
Bonanza-Hunker Placer Area **Site no. 4**

OPERATION/LOCATION Tim Coles and Dave Brickner revisited a previously mined area on the right limit bench of Bonanza Creek between Lovett Gulch and Trail Gulch in 2001.

EQUIPMENT/FUNCTION One Komatsu PC400 excavator was used to strip overburden, dig pay gravel, load the dump truck and feed the wash plant. One 15-yard dump truck was used to haul pay gravel from the mining cut to the wash plant.

WASH PLANT An oscillating screen deck, 5 feet by 11 feet, with a single oscillating sluice run. Oversize tailings were removed by conveyor belt. A 6-inch by 5-inch water pump, powered by a GMC 271 diesel engine, delivered about 1500 igpm which was used to process up to 100 cubic yards per hour. A long tom and gold wheel were used for final cleanups.

GROUND DESCRIPTION White Channel gravel tailings from past mining of a high bench deposit were up to 25 feet deep on top of virgin ground. A total depth of about 40 feet of the tailings, frozen black muck and sand overlay pay gravels which were up to 5 feet deep with river cobbles and large rounded boulders close to fractured bedrock. All gravel plus about 3 feet of bedrock were sluiced.

MINING CUTS Due to restricted space and the depth of the ground only one cut, about 35 feet wide by 300 feet long, was mined over the two seasons.

WATER SUPPLY AND TREATMENT Water was pumped directly from Bonanza Creek using a small intake ditch, and was cleaned up in out-of-stream settling ponds measuring 300 feet by 50 to 60 feet wide. The only discharge was from minor seepage.

GOLD Mostly smooth gold particles with nothing heavier than 1 gram in weight was found. The fineness was around 790.

BONANZA CREEK

115O/14

Kohlman Exploration & Mining Ltd. 63°59'N 139°22'W
Water Licence: PM99-087 1998, 2000, 2001, 2002
Bonanza-Hunker Placer Area **Site no. 5**

OPERATION/LOCATION Leo Twordik ran a two-person operation in 1998 at this site. There was no mining in 1999. In 2000 and 2001, Tim Coles and Cam Arkinstall ran a three-person operation on lower Bonanza Creek just upstream from Sourdough Gulch, along the left limit of the valley bottom. Tim Coles left the operation in 2002 to mine on upper Dominion.

EQUIPMENT/FUNCTION A Fiat Allis 41 bulldozer was used for stripping waste gravel. A John Deere 890 excavator with a 2-yard bucket and a Lieb Herr 981 excavator were used for digging pay gravel and stacking tailings. A Terex 50 ton rock truck was used to haul gravel and a Huff 120 loader with a 5-yard bucket was used to feed the wash plant.

WASH PLANT A trommel, 6½ feet in diameter by 40 feet long, classified material to ½ inch and fed onto four oscillating sluice runs, 16 feet wide. An 8- by 10-inch Paco water pump powered by a Cummins 195 diesel engine provided approximately 2500 igpm which were used to process from 125 to 150 cubic yards per hour.

GROUND DESCRIPTION Fifty feet of frozen overburden overlay 16 feet of pay gravel along the left limit of the Bonanza valley bottom. The centre of the valley was covered with dredge tailings and the valley walls were very steep on both sides.

MINING CUTS In 2000, a narrow cut about 10 feet wide by 400 feet long was removed from the left limit at the base of the hillside. In 2001, the cut moved into and up the hillside about 16 feet deep by 60 feet wide by 90 feet long. Mining continued in this vein on a smaller scale in 2002.

WATER SUPPLY AND TREATMENT Water was pumped directly from Bonanza Creek and was settled in two large out-of-stream ponds in old mining cuts with seepage discharge only.

GOLD Gold was mostly fines with a few small flakes and fineness around 780.

BONANZA CREEK

1150/14

Wolreid WGR Mining Ltd. 63°59'N 139°15'W
 Water Licence: PM97-031 1998, 1999, 2002
 Bonanza-Hunker Placer Area **Site no. 6**

OPERATION/LOCATION John Adam ran a one-person operation on Bonanza Creek, on the right limit of the valley bottom, between Mosquito Gulch and Queen Gulch under the auspices of Wolreid (Bob Cattermole) for 1998 and 1999. The property was not mined in 2000 or 2001. In 2002, Roland Berglund and Dan Trudeau took over mining the property and moved over to the left limit bench of Magnet Hill.

EQUIPMENT/FUNCTION An Hitachi 400 excavator was used to dig pay gravel as well as for cleaning out settling ponds. One Caterpillar D9 bulldozer was leased temporarily to rip bedrock, and one Caterpillar 966 loader was used full time to feed the wash plant and to remove tailings. Hydraulic stripping of the frozen overburden was accomplished with a 10 by 12-inch pump, powered by a Caterpillar 3206 diesel engine which supplied about 4000 igpm to the 4-inch nozzle water monitor. When the change in operators occurred in 2002, the equipment consisted of a D9 and a D8 Caterpillar

bulldozer used for stripping and general purposes, a 988F Caterpillar loader, which fed the sluice plant, and a 280 Samsung hoe loaded a 15-yard Mack dump truck for hauling materials.

WASH PLANT A 10-foot by 20-foot Derocker fed into an 8-foot by 8-foot sluice run with hydraulic expanded metal riffles, followed by a 3-foot wide by 30-foot long sluice run with 1½-inch angle iron riffles. A Lister 4-inch water pump supplied about 1500 igpm which was used to process about 100 cubic yards per hour. Mr. Berglund and Mr. Trudeau switched to a 4-foot trommel with a 12 by 12-foot Grizzly. The conveyor used was 2 by 30 feet and screened material to ½ inch minus. The sluice runs were 4 by 6 feet, lined with Hungarian riffles. A Monarch 6 by 6-inch pump was powered by a Deutz diesel engine capable of processing 800 igpm.

GROUND DESCRIPTION Frozen black muck with ice lenses was up to 70 feet deep on top of about 6 feet of pay gravel. Bedrock was hard and chunky and broke off in blocks. All gravel plus about 1 foot to 18 inches of bedrock were sluiced. When the new operators moved to Magnet Hill, 6 feet of stockpiled gravel were sluiced.

MINING CUTS One mining cut, about 150 feet wide, was excavated back into the hillside about 35 to 40 feet per season for 1998 and 1999. When mining re-commenced in 2002, 2500 cubic yards of previously stripped material was sluiced in the fall.

WATER SUPPLY AND TREATMENT Water was pumped from an in-stream reservoir and was cleaned in two out-of-stream settling ponds beside Bonanza Creek. This was increased to four out-of-stream ponds when new management took over, with a 50% water use recycle rate.

GOLD Gold was mostly fines with a few larger flakes but no nuggets. Gold was cleaned up using a jig, a long tom and a vibrating gold table. Fineness was around 780.

COMMENTS Several prehistoric mammoth bones and one tusk were found within the frozen overburden.

SKOOKUM GULCH

1150/14

Ivan Daunt 63°55'N 139°20'W
 Water Licence: PM99-130 1998, 1999, 2000, 2001, 2002
 Bonanza-Hunker Placer Area **Site no. 7**

OPERATION/LOCATION Ivan Daunt has mined about 2000 feet, working upstream on Skookum Gulch, from its confluence with the left limit of Bonanza Creek, just below Grand Forks.

EQUIPMENT/FUNCTION One Komatsu bulldozer (D6 equivalent) was used for excavating pay gravel. One Caterpillar 951

crawler loader was used for removal of tailings. One Caterpillar 966B loader was used to feed the wash plant.

WASH PLANT A small hopper over a 5 feet by 12 feet shaking screen deck classified pay gravels to ¾ inch. A single sluice run was 3 feet wide by 20 feet long with angle iron riffles over a plastic mat. A 6-inch by 6-inch Monarch pump, powered by a Perkins V8 diesel engine, delivered about 1200 igpm of water which was used to process up to 40 yards per hour.

GROUND DESCRIPTION Frozen black muck overburden, with evidence of old mining shafts, was 25 to 30 feet deep. Pay gravels varied from 3 to 6 feet deep and were up to 20 feet wide in the gulch bottom. All gravels plus 2 to 3 feet of broken bedrock were sluiced.

MINING CUTS One main cut in the valley bottom centre averaged about 30 feet wide by 15 feet deep and was progressively worked upstream by 75 to 100 feet per season. Up to 4000 cubic yards per season were processed.

WATER SUPPLY AND TREATMENT One in-stream reservoir pond in Bonanza Creek was used to supply make-up water to an in-stream recycle pond on Skookum Gulch. Several in-stream settling ponds were also located in Skookum Gulch, immediately below the wash plant but above the recycle pond.

GOLD Gold was rough and angular with quartz attached and fineness around 660.

BONANZA CREEK

1150/14

W.L. Roberts and Edward White

63°57'N 139°14'W

Water Licence: PM97-033

1998, 1999, 2000, 2001, 2002

Bonanza-Hunker Placer Area

Site no. 8

OPERATION/LOCATION This two-person operation was located on upper Gauvin Gulch about 2½ miles upstream from its confluence with the right limit of Bonanza Creek. The property had been tested in 1996 and 1997 and mining began in 1998. The operation was reduced to one person in 2001.

EQUIPMENT/FUNCTION One International TD8 bulldozer was used to strip overburden and to push tailings gravel. A Case 480E excavator was used to dig pay gravel and load a Ford 15-yard dump truck, which hauled the pay gravel to the wash plant. A Bobcat 720 loader was used to feed the wash plant.

WASH PLANT A 4-foot by 6-foot dump box on top of a 4-foot by 5-foot shaking wet screen deck fed into a single sluice run. The sluice run was 2 feet wide by 20 feet long, with expanded metal riffles over Nomad matting for the first 8 feet of length, then a section of slick plate followed by 2-inch angle iron riffles. A Gorman Rupp 4-inch pump, powered by a



Looking at the mining cut on the left limit of upper Gauvin Gulch where W.L. Roberts used this small back hoe/loader to feed the wash plant in the foreground. Several large boulders removed from the pay zone can be seen near the wash plant.

Deutz diesel engine, supplied about 600 igpm of water which was used to sluice 10 to 15 cubic yards per hour.

GROUND DESCRIPTION Frozen overburden varied from 25 to 50 feet deep on top of only 4 to 6 feet of gravel. Gravel was mixed with some clay. All gravels, plus 1 foot of decomposed bedrock, were sluiced. In 2002, the operator encountered 12 feet of overburden, with bedrock at 34 feet. The grey gravels contained large quartz boulders and some serpentine.

MINING CUTS One mining cut in the centre of the valley bottom was about 60 feet wide, and was stripped and processed about 30 feet long in 1998, 50 feet long in 1999, 30 feet long in 2000 and 36 feet long in 2001. A similar size cut was mined in 2002, totalling around 2500 cubic yards.

WATER SUPPLY AND TREATMENT Near the top end of Gauvin Gulch there was very little creek water, so spring meltwater and groundwater seepage were recycled within two in-stream settling ponds in Gauvin Gulch, with seepage discharge only.

GOLD Rough, angular gold with some dendritic nuggets was cleaned up using a long tom and a gold wheel, and had fineness around 664.

COMMENTS One of the partners in this operation, Edward White, passed away on 24 June 1999.

BONANZA CREEK	1150/14
Alfred and Marlene Roberts	63°56'N 139°16'W
Water Licence: PM99-064	1998, 1999, 2000, 2001, 2002
Bonanza-Hunker Placer Area	Site no. 9

OPERATION/LOCATION This two-person family operation has mined in the centre of upper Homestake Gulch, about two miles upstream from its confluence with the right limit of Bonanza Creek, for more than 20 years. The bottom of Homestake Gulch was about 100 feet wide in this area, with very steep sides which got steeper toward the upstream end of the claims.

EQUIPMENT/FUNCTION A Caterpillar D8H bulldozer was used for stripping overburden, digging gravel, and pushing pay gravel toward the wash plant. A Bucyrus-Erie 20B drag line, with a ½-yard bucket, was used to feed the wash plant and to clean out the settling ponds.

WASH PLANT A Kotman-Atthey wet shaking screen deck, 5 feet by 10 feet, classified material to 1 inch, followed by one sluice run, 24 inches wide by 20 feet long, with expanded metal riffles for the first 12 feet and then 8 feet of 1-inch riffles at a slightly steeper slope. In 1998, a new Gorman Rupp 6-inch pump was added, powered by a GM diesel engine, supplying about 500 igpm of water which was used to process 25 cubic yards per hour.

GROUND DESCRIPTION Frozen black muck overburden was 15 to 20 feet deep on top of 2 to 6 feet of pay gravels mixed with slide bedrock. All gravels, plus 2 to 3 feet of decomposed broken bedrock, were sluiced.

MINING CUTS In 1998 and 1999, overburden was stripped and pay gravel excavated from one cut up to 50 feet wide by 500 feet long, with about 1500 cubic yards sluiced in 1998



Close-up view of Alf Roberts using a drag line with ½ yard bucket, to dig pay gravel and feed the wash plant, in Homestake Gulch.

and 1200 cubic yards sluiced in 1999. In 2000 and 2001, the pay streak narrowed to about 20 feet wide and one cut was stripped and mined about 300 feet long. Approximately 2000 cubic yards were processed in 2000, and in 2001 about 1300 cubic yards were sluiced. By 2002, mining had been completed and Mr. Roberts spent the season performing reclamation work, dewatering settling ponds, recontouring valley sides with tailings and overburden.

WATER SUPPLY AND TREATMENT Water was pumped from one in-stream recycle pond, 50 feet wide by 150 feet long. Sluice water was directed through two out-of-stream settling ponds before being recycled.

GOLD Dull coloured, chunky, angular gold, mostly larger than 10 mesh, had a fineness around 664 and was cleaned up using a long tom and gold wheel.

COMMENTS Mine shafts with old clothing, tin cans and tools, were found in the frozen overburden and gravel. An old drift with a wooden ore box on wooden tracks was opened along the left limit.

BONANZA CREEK	1150/14
Henry Gulch Placers	63°55'N 139°16'W
Water Licence: PM95-057	1998, 1999, 2000
Bonanza-Hunker Placer Area	Site no. 10

OPERATION/LOCATION John Alton and Marty Knutson ran a four-person operation on Upper Bonanza Creek below O'Neil Gulch, in 1998 and 1999 as well as in O'Neil Gulch, a left limit tributary of Upper Bonanza Creek, in 1998, 1999 and 2000.

EQUIPMENT/FUNCTION One Caterpillar 235 excavator was used to strip overburden, dig pay gravel and feed the wash plant. A Caterpillar D9G bulldozer was used for stripping, and two Caterpillar D350 haul trucks were used to carry pay gravel to the wash plant. A Caterpillar 980B loader was used for removing tailings.

WASH PLANT A shaker deck classified to ¾ inch and fed into a 4-foot by 10-foot sluice run with angle iron riffles, and then into three 4-foot wide oscillating sluice runs with 1-inch expanded metal riffles over Nomad matting.

GROUND DESCRIPTION While the Upper Bonanza Creek valley bottom was covered with dredge tailings, the right limit below O'Neil Gulch had 12 to 14 feet of thawed muck overburden on top of 6 to 8 feet of gravel which contained some large quartz boulders close to bedrock. The bottom 4 feet of gravel plus 2 feet of bedrock were sluiced. Within O'Neil Gulch, there was frozen organic overburden up to 12 feet deep on top of gravel layers up to 10 feet deep.



Looking upstream on O'Neil Gulch at Henry Gulch Placers using an excavator to dig pay gravel and feed the wash plant.

MINING CUTS Along the left limit of the Upper Bonanza Creek valley, one cut along the right limit rim was 60 feet wide by 20 feet deep and was mined for a total length of about 3500 feet. Within O'Neil Gulch, one cut about 800 feet long by 75 feet wide was stripped in 1998 and 1999, and then the bottom 600 feet by 75 feet were sluiced in 2000.

WATER SUPPLY AND TREATMENT Water was supplied from an in-stream reservoir and was settled in out-of-stream ponds with a creek bypass channel on Upper Bonanza Creek.

GOLD Most of the gold was fine-grained. Cleanup was performed with a jig and a gold wheel and the fineness ranged around 800. Within O'Neil Gulch, gold recovered included some small crystalline nuggets and a few nuggets with quartz attached. Fine gold was about 55% smaller than 14 mesh, 40% between 6 and 12 mesh and less than 5% larger than 4 mesh.

COMMENTS Old tools like shovels and picks, and other evidence of early mining as well as frozen buffalo bones were found.

VICTORIA GULCH

1150/14

Jerry Bryde

63°54'N 139°14'W

Water Licence: PM00-153

1998, 1999, 2000, 2001, 2002

Bonanza-Hunker Placer Area

Site no. 11

OPERATION/LOCATION Jerry Bryde has run a one-person operation for the past 15 years, located at the uphill end of 7 Pup, a left limit tributary to Victoria Gulch, immediately below the historic Lone Star Mine hard rock location.

EQUIPMENT/FUNCTION A Caterpillar D7 bulldozer was used to excavate pay gravel and feed the wash plant. A Caterpillar 941B track loader with a 1½-yard bucket was used to stack

tailings and for back up. An Insley dragline with ½-yard bucket was used to clean out settling ponds.

WASH PLANT A 30 feet long by 10 feet wide dump box fitted with a water monitor, washed into an Overstrom ¾-inch screening deck, 4 feet wide by 8 feet long, with two sluice runs, each 2 feet wide by 12 feet long, lined with expanded metal riffles over Nomad mat. A 4-inch Gorman Rupp water pump, powered by a Lister diesel engine, delivered about 400 igpm which was used to process from 20 to 30 cubic yards per hour.

GROUND DESCRIPTION Up to 2 feet of organic overburden, mixed with angular rock, overlay 2 to 4 feet of mixed gravels and clay seams, on top of decomposed Klondike schist bedrock with quartz veins. All overburden below the moss layer, plus all gravel, was sluiced. In the area worked in 2002, there was up to 3 feet of slide rock and soils with quartz fragments. From 3 to 6 feet, the composition changed to include clays, sands and some gold. The altered schist showing quartz veining and serpentine, interspersed with shear zones, appeared below 6 feet. Associated heavy minerals recovered during the sluicing process included abundant barite, goethite (after pyrite) and minor amounts of magnetite.

MINING CUTS From 1500 cubic yards to 3000 cubic yards per season were excavated from cuts about 6 feet deep by 100 feet long, with widths varying between 60 feet to 120 feet per season. In 2002, approximately 1700 cubic yards were processed from a pit 100 by 80 by 6 feet deep. All sections below moss to the unaltered bedrock are sluiced. Final cleanups were done with a long tom sluice box, panning and blowing.

WATER SUPPLY AND TREATMENT Seepage water from the old Lone Star adit, known as the Boulder Lode, was siphoned



Jerry Bryde doing final cleanup using a gold pan on 7 Pup.

into a 1½-inch polyethylene pipe about 3500 feet long which delivered about 8 igpm to the recycle pond which also collected spring run off and spring water when zones were active. This recycle pond was roughly 150 feet long by 100 feet wide by 10 feet deep. The settling facility was 150 by 100 by approximately 6 feet, deep with no surface discharge. The operation relied on 100% recycle.

GOLD Bright, shiny angular and crystalline gold was recovered, some with quartz attached. Mesh sizes ranged from 5% -10 mesh, 65% from +10 mesh to +60 mesh and 30% at -60 mesh. Composition was 80.615% gold, 19% silver and .02% copper.

COMMENTS In areas that have been excavated and exposed in situ, material deteriorates rapidly due to the high sulphide content (pyrite). These areas are quickly inhabited by wild rhubarb, fireweed and willows. Abandoned eight-year-old settling ponds are now dense with willows that have grown to a height between 8 and 10 feet. Attempts to utilize these ponds as vegetable gardens have proven interesting and highly productive. Quartz float with visible gold veining is common at this site. Sadly, to date, the only market has been the Alaskan tourists. Collecting and preserving antique mining machinery has proven very rewarding to this operation, including the highlight: a Mietz and Weiss 15 horsepower hot bulb oil engine, circa 1902, with compressor!

VICTORIA GULCH 1150/14

Everett Kissler 63°54'N 139°14'W
 Water Licence: PM96-089 1999, 2000, 2001, 2002
 Bonanza-Hunker Placer Area **Site no. 12**

OPERATION/LOCATION Everett Kissler took over this one-person operation in 1999 from Peter Bodin. Located near the top end of 7 Pup, a left limit tributary of Victoria Gulch, on Upper Bonanza Creek.

EQUIPMENT/FUNCTION A Caterpillar 966 loader was used to dig pay gravel, feed the wash plant and remove tailings.

WASH PLANT A shaking screen deck about 10 feet by 10 feet was followed by a single sluice run 2 feet wide by 21 feet long with expanded metal riffles over Nomad matting. A Gorman-Rupp 4-inch water pump supplied about 400 igpm of water which was used to sluice about 25 cubic yards per hour.

GROUND DESCRIPTION There was no overburden left on the surface in the area of mining; surface gravels mixed with tailings from old workings occurred throughout with depths varying from 5 feet minimum to 20 feet maximum. All gravel was sluiced from surface to bedrock.

MINING CUTS One main cut to near the middle of the claim was mined at a rate of about 2000 cubic yards per season.



View of Jerry Bryde's shaker deck and sluice run set up in the mining cut on 7 Pup.



Close up view of the dump box, shaker plant and sluice runs used by Everett Kissler on 7 Pup, a left limit tributary to Victoria Gulch on Upper Bonanza Creek.

WATER SUPPLY AND TREATMENT Surface runoff was minimal this high up on the hill side but seepage water was recycled in two settling ponds about 50 feet by 50 feet each.

GOLD Coarse gold was found with a few small nuggets, some with silver attached, and a fineness around 860.

VICTORIA GULCH

1150/14

Ray and Shirley Anderson

63°54'N 139°13'W

Water Licence: PM99-075

2000

Bonanza-Hunker Placer Area

Site no. 13

OPERATION/LOCATION Ray and Shirley Anderson had been unable to mine in 1996 due to glaciation on a major portion of Victoria Gulch. This condition continued to plague the operation until the 2000 season when they were able to resume activity in the bottom centre of Victoria Gulch, about ½ kilometre upstream from its confluence with the left limit of Upper Bonanza Creek. No activity or water use occurred in 2001 or 2002.

EQUIPMENT/FUNCTION A Case 1150 track loader was used to strip overburden, dig pay gravel, feed the wash plant and remove tailings.

WASH PLANT A 10-foot square hopper fed onto a 5-foot by 7-foot shaker deck which classified to ¾ inch. A single sluice run was 30 inches wide by 12 feet long with expanded metal riffles over Nomad matting. A Homelite 3-inch pump provided about 300 igpm which was used to process about 30 cubic yards per hour.

GROUND DESCRIPTION Victoria Gulch in this area is steep sided. Overburden had been previously removed from the valley bottom and pay gravels averaged 8 feet deep. All gravel, plus about 1 foot of bedrock, was sluiced.

MINING CUTS One main cut has been worked progressively upstream along the left limit of the valley bottom until glaciation prevented further mining. In 2000, the Andersons reported 150 hours of sluicing.

WATER SUPPLY AND TREATMENT A small in-stream reservoir was maintained at the upstream end of the claims with three in-stream settling ponds below.

GOLD Coarse gold has been recovered with fineness around 820.

BONANZA CREEK

1150/14

6077 Yukon Ltd.

63°55'N 139°08'W

Water Licence: PM97-055

1998, 1999, 2000, 2001, 2002

Bonanza-Hunker Placer Area

Site no. 14

OPERATION/LOCATION Dave Trainer and Barbara Coomes started mining on Carmack Fork about ½ mile upstream from its confluence with the right limit of Upper Bonanza Creek. This ground was first tested in 1997 and mining began in 1998.

EQUIPMENT/FUNCTION Two Caterpillar bulldozers, a D8K and a D7, were used to strip overburden and excavate gravel. A Caterpillar 980 loader was used to remove tailings and an American M25 excavator (235 equivalent) was used to feed the wash plant. In 2002, only the D8K Caterpillar bulldozer and a Fiat Allis 45 front-end loader were employed.

WASH PLANT A de-rocker dump box, 10 feet wide by 15 feet long, fed into a single sluice run, 4 feet wide by 30 feet long, with oscillating angle iron riffles. A 6-inch Perkins water pump supplied about 2000 igpm used to sluice 100 to 150 cubic yards per hour.

GROUND DESCRIPTION Organic overburden, from 8 to 20 feet deep, was thawed near the creek channel and frozen along the sides of the valley. Gravel layers were up to 12 feet deep and the bottom 6 feet of gravel, plus 1 foot of bedrock, were sluiced. Bedrock was composed of wavy, decomposed schist.

MINING CUTS In 1998, three small cuts totalled approximately 30 feet wide by 150 feet long. In 1999, one cut was 65 feet wide by 400 feet long. In 2000, one cut was about 30 feet wide by 100 feet long and in 2001, at a wider part of the valley as mining moved upstream the cut was about 200 feet wide by 400 feet long. Two cuts were mined in 2002, measuring 500 by 50 feet and 100 by 100 feet.

WATER SUPPLY AND TREATMENT Make-up water only was pumped directly from Carmack Fork and process water was recycled from within an out-of-stream settling pond. The pond itself was approximately 300 by 150 feet in size. A creek bypass channel around the settling pond was built and maintained along the left limit of the valley bottom.

GOLD Cleanups were conducted using a long tom. Fine powder gold only, no flakes or nuggets, with fineness of 692. In 2002, the gold recovered was slightly rougher in texture.

COMMENTS Evidence of oldtimers' workings (shafts) and various ancient animal bones have been found. Wayne Hawkes of Dawson City completed most of the mining done in 2002. A move to upper Little Blanche Creek is being considered for the 2003 season.

BONANZA CREEK **1150/14**

Chesla McGee 63°54'N 139°08'W
 Water Licence: PM00-175 1998, 1999, 2000
 Bonanza-Hunker Placer Area **Site no. 15**

OPERATION/LOCATION This one-person operation, located on Upper Bonanza Creek above the Parks Canada Heritage Reserve, was mined by Edward Paine since the early 1990s until August of 1998. The operation and water licence were transferred to Chesla McGee, who mined in 1999 and 2000.

EQUIPMENT/FUNCTION In 1999, a Caterpillar D9 bulldozer was leased to enlarge the mining cut by stripping overburden and waste gravel. A John Deere 350 track loader with a ¾-yard bucket was used to excavate pay gravel, feed the wash plant, remove tailings and maintain settling ponds.

WASH PLANT A 4-foot by 8-foot dump box with water spray bar fed onto a 3 by 5-foot shaking screen deck which classified material down to ¾ inch. This was followed by a single sluice run, 21 inches wide by 12 feet long, with expanded metal riffles over Astroturf matting. A Gorman-Rupp 3-inch pump, powered by a Wisconsin 16 horsepower gasoline engine, supplied 100 igpm of water which was used to process approximately 10 cubic yards per hour.

GROUND DESCRIPTION Frozen overburden was 4 to 6 feet deep on top of 16 to 20 feet of sandy gravel layers mixed with mud and silt layers. The bottom 4 feet of gravel, plus approximately 3 feet of decomposed bedrock, were sluiced.

MINING CUTS One main mining cut near the centre of the valley bottom was increased from about 60 feet by 100 feet in 1998 to about 100 feet square in 1999 by stripping overburden and waste gravels. Pay gravel had been excavated and sluiced at a rate of approximately 500 cubic yards per season.



Small track-loader and wash plant used by Chesla McGee on Upper Bonanza Creek.

WATER SUPPLY AND TREATMENT Make-up water was supplied from Bonanza Creek via a short gravity ditch to an out-of-stream recycle pond. There was no discharge other than minor seepage.

GOLD Coarse gold was found with some quartz attached and flat flakes had a fineness of around 790.

COMMENTS There has been no evidence of any old mine workings to date at this site.

BONANZA CREEK **1150/14**

6077 Yukon Ltd. 63°54'N 139°07'W
 Water Licence: PM98-048 1998, 1999, 2000, 2001, 2002
 Bonanza-Hunker Placer Area **Site no. 16**

OPERATION/LOCATION Vern Trainer continued mining on Upper Bonanza Creek above Carmack Fork and progressing upstream toward the confluence with Ready Bullion Gulch. This two-person, family operation has been mining at this location for the past ten years.

EQUIPMENT/FUNCTION Two Caterpillar D8 bulldozers were used for stripping overburden and digging pay gravel. A Caterpillar 235 excavator was used to feed the wash plant and a Caterpillar 980 loader was used to remove tailings. One JVC excavator was used for cleaning out settling ponds.

WASH PLANT A derocker dump box, 10 feet by 15 feet, fed into a single sluice run, 4 feet wide by 30 feet long. The first 15 feet had 3/8-inch punch plate over expanded metal riffles, and the last 15 feet had angle iron riffles. An 8-inch by 10-inch Morris water pump, powered by a Pekins diesel, supplied about 2000 igpm which were used to sluice approximately 120 cubic yards per hour.

GROUND DESCRIPTION Frozen organic overburden, 15 to 20 feet deep, was stripped from on top of the gravel layer, which averaged 6 to 8 feet deep. All gravel, plus 1 or 2 feet of decomposed bedrock, were sluiced.

MINING CUTS Mining cuts in the valley bottom were of various sizes ranging from 40 to 150 feet wide. In 1998 and 1999, the mining cuts were less than 200 feet long. In 2000, 2001 and 2002, the mining cuts averaged 500 feet long each year.

WATER SUPPLY AND TREATMENT Water was pumped from an in-stream reservoir and settled in two out-of-stream ponds. A creek bypass channel was constructed along the left limit of the valley bottom around the area being mined and the settling ponds.

GOLD Mostly found was fine gold with a few small, flat flakes and fineness of 750.

COMMENTS Vern Trainer and his son Dave Trainer worked together at this operation and also at Dave Trainer's operation on nearby Carmack Fork.

BONANZA CREEK

1150/14

Wolreid WGR Mining Ltd.

63°55'N 139°19'W

Water Licence: PM97-032

1999, 2000

Bonanza-Hunker Placer Area

Site no. 17

OPERATION/LOCATION John Alton and Marty Knutson leased this ground at Grand Forks and ran a four-person operation, excavating pay gravel from the left limit of Eldorado Creek, just upstream from its confluence with Upper Bonanza Creek.

EQUIPMENT/FUNCTION A Caterpillar D9H bulldozer was used for stripping overburden and waste gravel as well as for flattening tailing piles. Two Caterpillar excavators, one 235 and one 225, were used to excavate pay gravel and load two D350 dump trucks which hauled pay gravels to the wash plant. One Caterpillar 980B loader was used to feed the wash plant and remove tailings.



Overview of John Alton and Marty Knutson's mining cut near Grand Forks, showing two excavators digging pay gravel to load into dump trucks, plus one bulldozer stripping waste gravel.

WASH PLANT A 10-foot by 20-foot derocker with spray bars washed gravel and classified material down to 2 inches, followed by two oscillating sluice runs, 4 feet wide each, with expanded metal riffles on Nomad matting.

GROUND DESCRIPTION Washed White Channel gravels of up to 15 feet deep from previous bench operations were stripped from on top of older dredge tailings measuring 20 feet deep. Below these old tailings, along the left limit rim of the valley bottom, a 5 to 6-foot seam of frozen black muck overburden overlay a gravel layer 2 to 4 feet deep. All of this gravel layer, plus about 2 feet of blocky bedrock, was processed.

MINING CUTS Most of 1999 was spent stripping overburden and waste gravel from one main mining cut which was about 100 feet wide by 300 feet long. Approximately 60,000 cubic yards of waste gravels were stripped in 1999 and about 10,000 cubic yards of pay gravels were sluiced. In 2000, another 50,000 cubic yards of material was stripped, out of which 12,000 cubic yards were sluiced.

WATER SUPPLY AND TREATMENT Sluicing water was pumped from a large, out-of-stream reservoir which was fed by seepage from Upper Bonanza Creek. Effluent was settled in two large out-of-stream settling ponds in old mining cuts located immediately below the confluence of Eldorado Creek and Upper Bonanza Creek, discharging into Bonanza Creek.

GOLD Chunky gold and some nuggets with quartz attached were recovered, plus fine gold. Sixty percent of the gold ran below 14 mesh, 35% from 6 to 12 mesh and less than 5% larger than 4 mesh.

COMMENTS Evidence of previous mine works recovered from the area included many old hand tools. Mining was completed in 2000 but in 2001 the operators returned to the site and back sloped the walls of the flooded mine cut and used sandy gravel to create a beach close to the KVA free panning claim at Grand Forks.

ELDORADO CREEK 1150/14

Beron Placers 63°54'N 138°18'W
 Water Licence: PM95-003 1998, 1999, 2000, 2001, 2002
 Bonanza-Hunker Area **Site no. 18**

OPERATION/LOCATION During the past four years Ron and Bern Johnson mined progressively upstream on Irish Gulch, since starting at its confluence with the left limit of Eldorado Creek in 1997.

EQUIPMENT/FUNCTION A Caterpillar D6C bulldozer was used for stripping and to pull a 6-inch auger drill used for setting explosives to dynamite black muck. A Caterpillar D8K bulldozer was used for stripping overburden and stockpiling pay gravel. A Caterpillar 245 excavator was used to dig pay gravel, feed the wash plant and clean out settling ponds. A Caterpillar 950 loader was used to remove tailings.

WASH PLANT A mobile wash plant mounted on wheels consisted of a 17 by 15-foot dump box and vibrating screen deck, 4 feet wide by 20 feet long, with four 4 feet wide by 10 feet long sluice runs which narrowed into a single sluice run 42 inches wide by 7 feet long. A conveyor 48 inches wide by 50 feet long was used to stack tailings. A Paco water pump, 8 inches by 10 inches, powered by a GM 871 diesel engine, supplied approximately 2500 igpm which was used to sluice up to 150 cubic yards per hour.

GROUND DESCRIPTION Frozen black muck overburden increased in depth as mining progressed upstream in Irish Gulch, starting with only 10 feet near the mouth and increasing to more than 50 feet deep on the upper right limit of the gulch. Near the middle of the gulch about 15 feet of black muck mixed with angular rocks covered pay gravels 3 to 5 feet deep. Up to 3 feet of broken bedrock was also sluiced.

MINING CUTS At the downstream end of Irish Gulch, mining cuts up to 300 feet long each were excavated to a width of about 75 feet. Mining moved upstream on the gulch at a rate between 300 and 500 feet per season, and width of cuts increased to 125 feet, then to a maximum of 150 feet. In 2000, a bench was discovered on the right limit that had been worked by oldtimers. This bench was finished in 2002, and extended for 600 to 700 feet upstream. The gravels buried under from 20 to 30 feet of black muck had been accessed by previous placer miners through drifts and production shafts.

WATER SUPPLY AND TREATMENT Water was pumped from a large reservoir/recycle pond located in the Eldorado Creek valley, uphill into Irish Gulch using more than 3000 feet of 10-inch aluminum pipe. A series of cross-valley rock-filled dams created permanent in-stream settling ponds in Irish Gulch.

GOLD Coarse, angular gold with numerous nuggets and fineness around 650 was recovered from Irish Gulch and cleaned up using a Wilfley table.

COMMENTS Many old shafts and other evidence of early mining was found in Irish Gulch. Reclamation at this site is progressive in nature, using mining cuts as settling facilities.

FRENCH GULCH/ELDORADO CREEK 1150/14

James Archibald 63°53'N 139°20'W
 Water Licence: PM98-057 1998, 1999, 2000, 2001
 Bonanza-Hunker Area **Site no. 19**

OPERATION/LOCATION James Archibald has mined at the confluence of French Gulch and Eldorado Creek for more than 20 years. From 1998 to 2002, the mining operation was located in the Eldorado Creek valley, immediately downstream from the mouth of French Gulch.

EQUIPMENT/FUNCTION A Caterpillar DC6 bulldozer was used for road building and maintenance, a Caterpillar D8K bulldozer was used for stripping overburden and excavating pay gravel, and a Caterpillar 980B loader was used to feed the wash plant and remove and stack tailings.

WASH PLANT A Derocker screening plant, 10 feet wide by 20 feet long, classified material to 2½ inches. The single sluice run was 2½ feet wide by 24 feet long with angle iron riffles. An 8-inch by 10-inch Fairbanks Morris water pump, powered by a 471 Detroit diesel engine, delivered about 1300 igpm of water which was used to process roughly 55 cubic yards per hour.

GROUND DESCRIPTION The Eldorado Creek valley below French Gulch was covered with old dredge tailing piles, 20 to 30 feet 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.

MINING CUTS Mining was conducted along the Eldorado Creek valley on the left limit below French Gulch from 1998 to 2002. The cuts varied from 50 to 80 feet wide by a maximum of 500 feet long each year.

WATER SUPPLY AND TREATMENT Water was recycled within one large out-of-stream settling pond which had a minimal seepage discharge.

GOLD Small particle gold was recovered from below the dredge tailings, all smaller than 16 mesh, with a fineness of around 710. Gold recovered from the side pay was coarser, most of which was over 16 mesh, and had a higher ratio of gold to silver of around 760 fineness.

KLONDIKE RIVER**116B/3**

Richard Zimmer 64°01'N 139°22'W
 Water Licence: PM96-057 1998, 1999, 2000
 Bonanza-Hunker Placer Area **Site no. 20**

OPERATION/LOCATION Richard Zimmer and Brendon White both ran underground mining operations at Jackson Hill, on the left limit bench of the Klondike River, immediately upstream from its confluence with Bonanza Creek. During the winter months, an upper bench level deposit of frozen White Channel gravel was excavated and stockpiled from previously mined adits and drifts. Stockpiled pay gravels were sluiced during the summers.

EQUIPMENT/FUNCTION A Caterpillar 235 excavator was used to re-open the existing mine portals. A drill and two scoop trams were used underground and a dump truck hauled pay gravels to the wash plant. A Caterpillar 980B loader was used to feed the wash plant.

WASH PLANT An 8 by 12-foot shaking screen deck fed two oscillating sluice runs with hydraulic riffles that were each 24 inches wide by 20 feet long. A high pressure water pump, 6 inches by 5 inches, powered by a Cummins 290 diesel engine, supplied about 500 igpm sluicing 50 to 60 cubic yards per hour. Oversized rocks and gravel were discharged downhill and a sand screw was used to stack tailings.

GROUND DESCRIPTION The White Channel gravel deposit on Jackson Hill was mined at the intermediate bench level, just above the hillside bedrock. An adit about 20 feet wide by 10 feet high was drilled and excavated through the frozen gravel, hauling out the bottom 6 to 8 feet of gravel, and up to 4 feet of decomposed bedrock, for sluicing.

MINING CUTS Existing drifts into the base of the White Channel gravel from previous mining operations were extended about 20 feet wide by 10 feet high by up to 1100 feet in length per year each winter.

WATER SUPPLY AND TREATMENT Water was pumped from a dredge pond in nearby Klondike valley into a recycle/settling pond on the bench. It took from 10 to 14 hours to initially fill the pond and then only a few hours per week to acquire make-up water. Discharge from the recycle/settling pond was by seepage only.

GOLD Only powder gold was found, having fineness of around 820.

COMMENTS Jackson Hill is riddled with mining structures, from shafts to drifts to major tunnels, which can accommodate underground trams specifically designed for hauling the ore under the low ceilings. This system of mining relies on the ground remaining frozen while work is performed and mine portals are blocked in early spring to

prevent thawing and/or entry. Some operations employ huge fans to maintain low temperatures during the winter mining season.

HUNKER CREEK**116B/3**

Wayne Fischer 64°03'N 139°11'W
 Water Licence: PM97-019 1998
 Bonanza-Hunker Placer Area **Site no. 21**

OPERATION/LOCATION Wayne Fischer and one other person ran a bulk test for part of the 1998 season at the mouth of Hunker Creek in the Klondike River valley.

EQUIPMENT/FUNCTION A Leibher excavator was used to excavate a test cut and for feeding the wash plant. A Timberjack 2500 loader was available for sluicing and miscellaneous jobs.

WASH PLANT The wash plant consisted of a vibrating screen deck mounted on a floating platform with sluice runs. The entire wash plant is self contained and run by electric motors. The 8-foot wide by 12-foot long screen deck classified the pay gravels to $\frac{1}{4}$ inch before being washed through four sluice runs 2 feet wide by 8 feet long. The sluice runs used hydraulic riffles and rubber matting. A 6-inch electric pump supplied water for sluicing from the recycle pond that the plant floated on. The plant was designed to process between 60 and 75 cubic yards per hour.

GROUND DESCRIPTION The ground was 35 feet deep with approximately 2 feet of silt and vegetation overlying 33 feet of mostly thawed gravels. Bedrock was hard and broken.

MINING CUTS A small cut was opened up, de-watered and the gravels were stockpiled next to the cut. A bulk test of approximately 1000 cubic yards were sluiced.

WATER SUPPLY AND TREATMENT The wash plant was built as a fully self-contained plant that floats on a pond. The water came directly from the flooded cut, and the pay gravels were sluiced back into the cut after the pay was removed and stockpiled. No direct discharge to any watercourse occurred.

GOLD Very little gold was recovered from the bulk test and an assay was not done.

HUNKER CREEK**116B/3**

Farley's Machine Inc. 64°02'N 139°07'W
 Water Licence: PM97-077 1998, 1999, 2000, 2001, 2002
 Bonanza-Hunker Placer Area **Site no. 22**

OPERATION/LOCATION In 1998, Dave Farley began this operation at the mouth of Hunker Creek, immediately next to the Klondike Highway. Four miners and one camp person ran two 12-hour shifts in 1998, clearing off trees and

brush before beginning the stripping work. A crew of five miners ran a single shift in 1999, stripping and sluicing. The operation was scaled down to a single shift of two miners in 2000 to do the sluicing. Mechanical work was done throughout most of 2001, with one pit partially excavated in the fall. Stripping and mechanical work continued through 2002.

EQUIPMENT/FUNCTION A Caterpillar 235 excavator and an EL-300 excavator were used along with a Caterpillar D-8K bulldozer for clearing and stripping in 1998. A Komatsu 355 bulldozer, a 769 dump truck and an O&K RH-75 excavator with a 13-yard bucket were added for stripping and sluicing in 1999. This equipment was used when needed during 2000 and 2001.

WASH PLANT A wash plant known as a 300 Maximizer was used. The pay gravels were dumped into a hopper which fed the sluice plant by conveyor. The gravels were washed and classified to 1-inch minus by four decks 8 feet wide by 4 feet long. The oversize gravels were carried off and stacked by conveyor. The 1-inch minus material was sluiced in two 66-inch wide by 20-foot long sluice runs. Both sluice runs used hydraulic riffles, expanded metal and Nomad matting. A 10-inch by 12-inch Cornell pump supplied the 3000 igpm needed to process approximately 200 cubic yards per hour.

GROUND DESCRIPTION The ground varied in depth but an average of 20 feet of silt overburden and 20 feet of gravel was encountered during stripping in 1999. The top 14 feet of gravel were wasted, and the lower 5 feet of gravel and 3 feet of bedrock were sluiced. The bottom 15 feet of the profile

were found to be frozen in areas. The water table is near the surface, meaning the cuts required continuous de-watering. Power from Dawson City was brought in during 2000, allowing the cut to be de-watered with lower-cost electric pumps.

MINING CUTS A single cut measuring 60 feet wide by 900 feet long was excavated in 1998 and 1999. Approximately 72,000 cubic yards were stripped and 16,000 cubic yards were sluiced. A single cut, 90 feet wide by 300 feet long, was excavated during 2000. Approximately 20,000 cubic yards were stripped and 8,000 cubic yards were sluiced. A single cut was partially excavated immediately next to the Klondike Highway in 2001 and in 2002, but very little sluicing occurred.

WATER SUPPLY AND TREATMENT Due to the high water table in this location, constant de-watering was required for the mine pit. The water was pumped by pipeline over Hunker Creek to two out-of-stream settling ponds. Clean water then returned to the pit by gravity through another pipeline over Hunker Creek. A re-circulation system was used during sluicing with the effluent going into the mine pit prior to being pumped to the settling ponds. The only direct discharge that occurred was clean seepage water that was pumped directly to Hunker Creek when not sluicing.

GOLD The gold recovered in 1999 and 2000 was reported to be 80 to 90% -10 mesh with the remainder +10 mesh. The gold is typically flat, rough and dull with a purity of 780 fine. Jig wheels and tables were used for the clean-ups.



Farley's Machine Inc. on Hunker Creek.

HUNKER CREEK**116B/3**

T.D. Oilfield Services Ltd. 64°02'N 139°09'W
 Water Licence: PM96-085 1998, 1999, 2000, 2001, 2002
 Bonanza-Hunker Placer Area **Site no. 23**

OPERATION/LOCATION This operation is located close to the mouth of Hunker Creek on the left side of the valley and extends for approximately 3 miles, covering a width of about 1000 feet. Doug Busat initially ran the mine for the years 1998 to 2001, employing six miners and one camp personnel, working a 12-hour shift daily. During 2001, a sale was negotiated with Dave Marsters of Grew Creek Ventures who also mined on Mint Gulch. Mr. Marsters took charge of the operation in late 2001 and mined in 2002 with a 12-person crew.

EQUIPMENT/FUNCTION A D9H Caterpillar bulldozer equipped with a U-blade and ripper was used to strip overburden and push tailings. Two Caterpillar loaders, a 980B (5½-yard bucket) and a 980C (4½-yard bucket), along with a 245 Caterpillar backhoe with 4-yard cleanup bucket and an Hitachi EX270 backhoe with a ½-yard bucket were employed in various capacities around the property. Two MT36 27-tonne Moxi rock trucks were used to haul material, including pay gravels to the wash plant.

WASH PLANT A screen deck wash plant with a 20-yard hopper dropped materials onto a grizzly. A 60-foot conveyor fed a 20-foot wide by 16-foot long sluice run lined with 1½ by ½-inch riffles and punch plate holes ¾ by ⅜ inches. The sluice run was sloped approximately 2½ inches per foot, lined with Nomad carpets and equipped with three 16-foot boiler boxes. Water was supplied by a Pasco 8 by 8-inch pump powered by a Caterpillar 3208 diesel engine and fed at a rate of about 2000 igpm. One hundred and twenty-five cubic yards were processed per hour.

GROUND DESCRIPTION Maximum depth of overburden to bedrock was about 30 feet. The gravel was partially thawed with some frozen spots. Particle sizes were 12-inch in diameter to sand, with an average of 3 inches. Bedrock was flat and wavy and there was some evidence of old shafts and workings. Old bones that were recovered were in poor shape. Most of the work took place 25 feet below surface water levels. The sluice section was 8 to 10 feet, 2 feet of which was bedrock. It was noted that ground composition in 2002 averaged 44 feet in depth, with 6 feet of black muck and 38 feet of gravel before pay began. At that point, 6 feet of pay gravels and 2 feet of bedrock were sluiced.

MINING CUTS In 1998, a 900 by 300-foot cut was opened and approximately 350,000 cubic yards were mined. An even larger area was mined in 1999, approximately 1000 by 300 feet. In 2000, a 400 by 700-foot cut was excavated, equalling about 400,000 cubic yards. A slightly larger area



T.D. Oilfield Services Ltd. on Hunker Creek.

was mined in 2001, 350 by 1000 feet. Production in 2002 was similar with about 130,000 cubic yards being sluiced.

WATER SUPPLY AND TREATMENT Water was supplied by ground seepage and captured in an 800 by 800-foot recycling pond. Effluent was settled out in a series of 3 ponds, the sizes of which were: 150 by 50 by 20 feet, 150 by 250 by 25 feet and 150 by 60 by 15 feet in depth.

GOLD The gold was flat, smooth and bright coloured, with a few nuggets. Fines ranged from 74 to 78%.

COMMENTS The valley at the mouth of Hunker had a very flat floor of considerable width. This allowed for a progressive mining plan in which cuts were used for the purpose of backfilling material and settling ponds. Each season, tailings were contoured, sides were sloped and topsoil was respread with the ponds being left for fish habitat and other recreational uses. This operation won the much-coveted Robert E. Leckie Award for Outstanding Placer Mining Reclamation Practices in November of 2001. The work performed included the reconstruction of the Hunker Creek Road, creek restoration and the reclamation of land disturbances (see page 20 for photo).

HUNKER CREEK**116B/3**

Henry Gulch Placers 64°02'N 139°10'W
 Water Licence: PM96-094 1998, 1999, 2000
 Bonanza-Hunker Placer Area **Site no. 24**

OPERATION/LOCATION John Alton and Marty Knutson mined along the left limit of Hunker Creek, downstream from Henry Gulch, primarily in 1999. Some testing was done in 1998, and hydraulic monitoring was conducted in 2000, immediately downstream of Henry Gulch. During the mining of a single cut in 1999, four miners ran a single 12-hour shift.

EQUIPMENT/FUNCTION A Caterpillar D9H bulldozer and a Caterpillar 235 excavator were used to strip the cut in frozen

ground. The pay was removed from the cut and stockpiled by a Caterpillar D350 truck, a Caterpillar 235 excavator and a Caterpillar 980B loader. The pay was sluiced back into the mine pit using the excavator and loader.

WASH PLANT A single deck shaker plant was used. The pay gravels were classified through ¾-inch punch plate and then sluiced through two side runs. The two side runs had boil boxes before the hydraulic riffles and expanded metal sections. Nomad matting was used. An 8-inch by 6-inch Capria pump powered by a Duetz engine supplied the 1500 igpm needed to process 60 cubic yards per hour.

GROUND DESCRIPTION The cut mined in 1999 was situated near the left limit of Hunker Creek. Between 12 and 18 feet of black mud was found above a layer of gravel, 8 to 10 feet deep. The bedrock was mostly black, solid and slabby. The lower 4 feet of gravel, and from 2 to 4 feet of the bedrock, were sluiced.

MINING CUTS A single cut measuring 180 feet by 140 feet by 30 feet was stripped, stockpiled and sluiced.

WATER SUPPLY AND TREATMENT The pay gravels were removed from the pit and then the pit was used to sluice back into. Water from Hunker Creek was used for sluicing and the effluent was treated in the out-of-stream mine pit.

GOLD The gold was reported to be mainly fine-grained with a fineness of 760.

HENRY GULCH 116B/3

Rick Gillespie 64°01'N 139°09'W
 Water Licence: PM99-089 1998, 1999, 2000, 2001, 2002
 Bonanza-Hunker Placer Area **Site no. 25**

OPERATION/LOCATION During the 1998 season, Rick Gillespie ran a one-person mining operation on Henry Gulch, a left limit tributary to Hunker Creek. Stripping and thawing of frozen ground occurred between 1999 and 2002. Very little sluicing occurred within those years.

EQUIPMENT/FUNCTION One Caterpillar D8H bulldozer with ripper and angle blade was used for stripping frozen overburden and gravels. One Caterpillar 225 excavator was used to dig pay gravel and feed the wash plant, and a Caterpillar 966C loader was used to remove and stack tailings.

WASH PLANT The wash plant consisted of a dump box which fed into a screen deck, 3 feet wide by 4 feet long, which classified down to 1¼ inch. A single sluice run was 25 feet long and had 1-inch riffles, 3½ feet wide, on Nomad mat in the top 12 feet section, followed by ¾-inch punch plate, 2 feet wide, on top of expanded metal over Nomad mat. A

Gorman Rupp 4-inch water pump, powered by an electrical generator supplied water to process from 25 to 30 cubic yards per hour.

GROUND DESCRIPTION A vegetative soil layer, about 2 feet deep, overlays up to 50 feet of frozen black muck containing silt and sand layers. All of this waste overburden had to be stockpiled uphill. The gravel layer at the bottom was 6 to 8 feet deep and all gravel, plus about 2 feet of bedrock, was sluiced.

MINING CUTS One small cut, approximately 1000 cubic yards, was sluiced in 1998. Between 1999 and 2002, stripping and thawing of overburden was carried out but very little sluicing was done.

WATER SUPPLY AND TREATMENT Henry Gulch has a small watershed with limited water supply. Spring melt water and rain water were ditched to an out-of-stream recycle/settling pond which was cleaned out as needed.

GOLD Course, angular gold with a few small nuggets and fineness around 680 was recovered.

HUNKER CREEK 116B/3

Wolreid WGR Mining Ltd. 64°01'N 139°08'W
 Water Licence: PM99-018 2000
 Bonanza-Hunker Placer Area **Site no. 26**

OPERATION/LOCATION Campbell Arkinstall and Tim Coles ran a four-person operation in 2000 along the left limit of Hunker Creek at the mouth of Dago Gulch.

EQUIPMENT/FUNCTION A Fiat-Allis HD41 bulldozer and a John Deere 890 excavator were used to strip overburden and dig pay gravel. A Leibherr 981 excavator was used to dig pay gravel and load a 50-ton Terex rock truck which hauled pay gravel to the wash plant. A Hough 120 loader was used to feed the wash plant.

WASH PLANT A 40-foot long trommel, 6½ feet in diameter, classified material and fed oscillating sluice runs 16 feet wide. An 8-inch by 10-inch Paco water pump, powered by a Cummins 195 diesel engine which delivered about 2000 igpm, was used to process up to 120 cubic yards per hour.

GROUND DESCRIPTION The valley bottom had been dredged in this area but some side pay remained along the left limit, with about 20 feet of thawed mud on top of 10 feet of frozen sand and mud, followed by 6 feet of coarse pay gravel. All bottom gravel, plus about 4 feet of decomposed bedrock, was sluiced.

MINING CUTS Three cuts were mined, each about 120 feet by 120 feet.



Historic Exploration's tunnel from the turn of the 20th century, on Hattie Gulch. There are several of these located on the property.



Campbell Arkinstall standing in a cut on Hunker Creek.

WATER SUPPLY AND TREATMENT Water was pumped from Hunker Creek and piped about 500 feet to the wash plant. Two out-of-stream settling ponds were used.

GOLD Gold was 90% fine with 10% larger than 12 mesh. Some dendritic gold was also recovered and fineness was around 720.

COMMENTS The site was reclaimed in September of 2000 and abandoned.

HATTIE GULCH 1150/14

Peter Gould	64°01'N 139°05'W
Water Licence: PM98-059	1999, 2002
Bonanza-Hunker Placer Area	Site no. 27

OPERATION/LOCATION Peter Gould operated on Hattie Gulch, a steep right limit tributary to lower Hunker Creek, in 1999 and 2002. No mining occurred in 2000 and 2001. Two people ran the operation in 1999 and three people worked in 2002.

EQUIPMENT/FUNCTION A Caterpillar D7F bulldozer was used to strip overburden, excavate and stockpile pay gravel and for settling pond construction and maintenance. A Caterpillar 930 loader was used to feed pay gravel into the wash plant and to remove and stack coarse tailings. Larger equipment was leased in 2002 for stripping the White Channel gravels.

WASH PLANT A hopper fed into a scrubber (trommel) 4 feet in diameter by 30 feet long. The 1-inch minus classified pay was sluiced in two 4-foot wide by 20-foot long oscillating runs. Nomad matting, expanded metal and some riffles lined the sluice runs. A Cornell 8-inch by 6-inch pump powered by a John Deere motor supplied the 1500 igpm needed for sluicing approximately 45 cubic yards per hour. An 8-inch by

6-inch pump supplied make-up water from Hunker Creek to the recycling ponds on Hattie Gulch when needed.

GROUND DESCRIPTION A thin layer of organic overburden was stripped from on top of a White Channel gravel deposit which varied, depending on location, from 20 feet to 100 feet deep. The bottom 10 feet of gravel, plus 1 or 2 feet of flat bedrock, were sluiced.

MINING CUTS Two cuts were mined in 1999 with approximately 11,000 cubic yards sluiced. Site preparation and stripping occurred in 2002, with only about 50 hours of sluicing.

WATER SUPPLY AND TREATMENT Make-up water was pumped from Hunker Creek and recycled in out-of-stream settling ponds located along the right limit of Hattie Gulch.

GOLD Most of the gold was reported to be fine-grained with a purity of 730 fine. Final clean-ups were done with a long tom and screens.

LAST CHANCE CREEK 116B/3

Wolreid WGR Mining Ltd.	64°01'N 139°07'W
Water Licence: PM95-090	1999, 2000
Bonanza-Hunker Placer Area	Site no. 28

OPERATION/LOCATION A cut was mined by Jake Jacobs along the right limit of Last Chance Creek near the mouth for the first part of 1999. Dave Brickner and Tim Coles ran an operation along the left limit of Last Chance Creek in the fall of 1999. Bob Cattermole continued mining the cut along the right limit in 2000. The operations were located approximately 2000 feet upstream from its confluence with Hunker Creek.

EQUIPMENT/FUNCTION Jake Jacobs used a 235 Caterpillar excavator and two smaller excavators as well as a D9H Caterpillar bulldozer for stripping and loading three 10-ton dump trucks which hauled the pay gravels to the wash plant. Tim Coles and Dave Brickner used a Terex 8250 bulldozer



Wolreid WGR Mining Ltd. on Last Chance Creek.

for stripping overburden and waste gravel. A John Deere 890 excavator was used for digging pay gravel and sluicing. A Liebherr 945 excavator was used to feed the wash plant. Bob Cattermole used a variety of equipment that included a D9G Caterpillar bulldozer, a 641 Caterpillar scraper, two 235 Caterpillar excavators, a 980C Caterpillar loader and a Fiat Allis HD41 bulldozer.

WASH PLANT Tim Coles and Dave Brickner used a 5-foot by 11-foot oscillating deck screening plant which classified the pay gravels before being sluiced through two 8-foot wide by 12-foot long oscillating sluice runs. The sluice runs were lined with Monsanto matting and expanded metal. A 6-inch by 5-inch water pump, powered by a GMC 271 diesel engine, delivered 1500 igpm which was used to process up to 100 cubic yards per hour. Bob Cattermole used a wash plant with a grizzly, feeding into a hopper followed by a derocker. The classified gravels were sluiced through a 4-foot by 20-foot sluice run. A 10-inch Caterpillar pump supplied water for sluicing approximately 70 cubic yards per hour.

GROUND DESCRIPTION Tim Coles/Dave Brickner: Up to 30 feet of washed White Channel gravel tailings from historic uphill operations was stripped from on top of about 2 feet of organic muck and 2 feet of gravel. All the ground was thawed. All the bottom gravels and about 4 feet of decomposed bedrock were sluiced. Bob Cattermole/Jake Jacobs: Up to 60 feet of both frozen and thawed material was excavated. The material removed was layered with silt and clay with rocks, bones and sticks found throughout. Several shafts from old workings were encountered.

MINING CUTS Jake Jacobs processed a single cut, 200 feet by 100 feet, in 1999. Tim Coles and Dave Brickner mined one cut about 300 feet by 100 feet in 1999. Bob Cattermole sluiced three cuts, 50 feet by 10 feet, in 2000.

WATER SUPPLY AND TREATMENT Water was pumped from an in-stream reservoir in Last Chance Creek and was settled in an old mining cut from a previous operation.

GOLD Gold found was mostly fines with only 2% larger than 12 mesh. The gold tended to be dull and nuggets often had quartz attached. The purity was reported as varying from 720 to 750 fine.

COMMENTS Tim Coles and Dave Brickner reportedly found numerous copper nails that had become gold plated while lying in the ground.

LAST CHANCE CREEK		116B/3
Henry Gulch Placers		64°00'N 139°07'W
Water Licence: PM00-206		2000, 2001, 2002
Bonanza-Hunker Placer Area		Site no. 29

OPERATION/LOCATION Marty Knutson and John Alton mined on Last Chance Creek, approximately 1500 feet upstream from the mouth, from 2000 through 2002. A crew of four miners ran a single 12-hour shift in 2000, and a crew of six miners ran a single 12-hour shift in 2001. A couple more employees were added in 2002. A left limit rim cut and a creek cut were mined in 2000. The operation mined through the 2001 and 2002 seasons along Last Chance Creek.

EQUIPMENT/FUNCTION A Caterpillar D9G and a D9H bulldozer, Caterpillar 225, 235 and 245 excavators, two Caterpillar D350 dump trucks, a Caterpillar 980B loader, and Caterpillar 621 and 631B scrapers were used at various times depending on what equipment was needed. Henry Gulch Placers operated at their largest scale in 2002. The bulldozers did preparation work for the scrapers, worked as pushcats for the scrapers and for clearing tailings. The 225 excavator was used for feeding the wash plant. The 235 excavator helped load pay gravels and dig drains. The 245 excavator was used primarily for digging and loading the pay gravels for sluicing. The D350 dump trucks were used for finishing the stripping and for hauling pay material to the wash plant. The scrapers were used for stripping and hauling overburden. The 980B loader was used for tailings and miscellaneous jobs.

WASH PLANT A two deck screening plant was used in 2000. The pay was classified to ½ inch minus before being sluiced through a sluice run 7 feet wide equipped with hydraulic riffles. The washed pay gravels were then run through three 4-foot wide oscillating sluice runs. Oversize gravels were stacked with a conveyor. A single deck screen plant was used in 2001 and 2002 which classified the pay gravels to ¾ inch minus before being sluiced in runs utilizing expanded metal and Nomad matting. Two boil boxes captured any coarse gold before being sluiced through a section of sluice run using 4 feet of hydraulic riffles and then expanded metal and Nomad matting. Oversize gravels were stacked with a conveyor. An 8-inch by 10-inch Fairbanks-Morris pump powered by a 371 G.M. engine supplied the 2000 igpm

needed to process approximately 70 cubic yards per hour in 2000, and up to 115 cubic yards in 2001 and 2002.

GROUND DESCRIPTION A left limit rim cut of Last Chance Creek was mined during the first part of 2000. The cut had a thin band of White Channel gravel overlying decomposed bedrock. All of the gravels and 1 foot of bedrock was mined on the rim cut. The creek ground mined for the last part of 2000 consisted of between 20 and 30 feet of old hydraulic White Channel gravels that had been washed off the rim overlying 15 feet of black mud and 6 feet of gravels. The creek cuts mined during 2001 varied considerably, with between 30 and 50 feet of hydraulic White Channel tailings overlying 8 to 20 feet of black mud and from 3 to 7 feet of gravel. The ground increased to a maximum depth of 70 feet in 2002, primarily due to the increased depth of historic White Channel gravels. The creek cuts processed between 3 and 5 feet of the lower gravel and from 2 to 6 feet of bedrock. The large oldtimer tailing dumps were sluiced as they proved to be economic when encountered.

MINING CUTS An area 600 feet long by 300 feet wide by 2½ feet deep was sluiced on the rim in 2000. The cut along Last Chance Creek mined in 2000 measured 400 feet by 150 feet by approximately 40 feet deep. Three cuts (302 by 323 by 40 feet deep/250 by 300 by 50 feet deep/140 by 130 by 52 feet deep) on Last Chance Creek were stripped and sluiced during 2001. Four cuts (250 by 200 by 50 feet deep/125 by 100 by 50 feet deep/375 by 130 by 65 feet deep/475 by 300 by 70 feet deep) were mined on Last Chance Creek working in an upstream direction.



Henry Gulch Placers on Last Chance Creek.

WATER SUPPLY AND TREATMENT An out-of-stream flow-by pond was used to provide water for sluicing in 2000 on the left limit rim of Last Chance Creek. Two 100 by 150 by 12-foot deep out-of-stream settling ponds provided effluent treatment. A recycle system back to the creek was used for the first part of 2001, with settling occurring in an old mine pit along the right limit of Last Chance Creek. After the first cut was processed on Last Chance Creek, the mine pits were used for a full recycle system for the remainder of 2001 and through 2002.

GOLD The gold recovered was reported to be primarily flat and fine with 96% -14 mesh. The purity was 735 fine. Mercury was recovered in areas and was common in oldtimers' tailings. Jigs and wheels were used for the final clean-up.

COMMENTS The dredge limits were located through the work done in 2001. Good gold values were located on bedrock.

LAST CHANCE CREEK	116B/03
Northway Mining & Exploration Inc.	64°00'N 139°06'W
Water Licence: PM95-091	1998, 1999
Bonanza-Hunker Placer Area	Site no. 30

OPERATION/LOCATION This operation worked on Preido Hill which is located on the right limit of Last Chance Creek at its confluence with Hunker Creek. In 1998, the operation employed 5½ miners covering two 12-hour shifts per day. In 1999, the crew was reduced to 2½ miners covering one 12-hour shift per day.

EQUIPMENT/FUNCTION The equipment used to mine this property included a Caterpillar D9L bulldozer, a Caterpillar 988B loader, a Caterpillar 245 excavator and two D550 Caterpillar rock trucks. The bulldozer was equipped with a 16-foot by 7.66-foot blade and a ripper. The loader had a 9-yard bucket and was used to remove tailings. The rock trucks

were 6 wheel drive and were used to haul pay to the plant and to move overburden. In 1999, only one of the rock trucks was used. The excavator served various functions.

WASH PLANT The wash plant consisted of a 5½-foot by 40-foot trommel, screening to ¾ inch, which was fed by a 12-foot by 15-foot hopper. Recovery was accomplished using 12-foot by 13-foot oscillating sluice runs with Nomad mats. The plant processed approximately 140 loose yards per hour. Water for the plant was provided at a rate of 1200 igpm using a 10- by 8-inch Paco pump powered by a 471 General Motors engine. A jig was used to clean up concentrates.

GROUND DESCRIPTION The maximum total depth of this ground was 60 feet. The average depth was 30 feet and the ground was thawed. The top 10 to 20 feet was a red coloured gravel over a layer of White Channel gravel which went down to bedrock. Bedrock in this area was described as wavy and decomposed. The sluice section was 12 feet deep.

MINING CUTS In 1998, two cuts were mined on Preido Hill. In 1999, three cuts were put in. They were 200 by 66 by 10 feet, 80 by 25 by 7 feet and 75 by 25 by 6.6 feet.

WATER SUPPLY AND TREATMENT Water for this operation was obtained from Last Chance Creek. It was pumped up to the hill and conveyed via an old ditch to two ponds. This operation accomplished 100% recycling of water. Water was pumped to the hill as needed to compensate for evaporation and some seepage from the ponds. The ponds on the hill were 400 feet by 150 feet and 200 feet by 200 feet.

GOLD The gold recovered from this site had a fineness of 815. It was reported as being crystalline with a bright colour. Ninety percent screened to less than 12 mesh. There were a few nuggets.

COMMENTS One old shaft and a drift about 100 feet long were found in the bench gravel.



Northway's wash plant located on Preido Hill, Last Chance Creek.

LAST CHANCE CREEK 115O/14G,116B/03A

Favron Enterprises Ltd. 64°00'N 139°06'W
 Water Licence: PM97-056 1998, 2000, 2001, 2002
 Bonanza-Hunker Placer Area **Site no. 31**

OPERATION/LOCATION The Favrons began preparations to start mining at this location late in 1998. Mining did not commence until 2000. The site is located approximately 1 kilometre up Last Chance Creek from its confluence with Hunker Creek. This area has been mined off and on since the Klondike gold rush. To date, this operation has worked in the centre valley bottom where the valley width is approximately 400 feet. The camp and other mining related buildings have been located up on the left limit bench of Last Chance. The Favron's operation employed five miners and three camp staff including the owners. They operated on a single 10-hour shift per day in 2000. The shift length increased to 12 hours per day in 2001. The crew increased to six miners in 2002.

EQUIPMENT/FUNCTION A Caterpillar D9L bulldozer equipped with a U-blade and ripper was used for stripping. An 8250 Terex bulldozer with a straight blade was used to push material to the scrapers. Two TS24B Terex scrapers were used to strip and to haul pay dirt. Two Bucyrus Erie 350 excavators were used at the site. One, which was equipped with a 2½-yard bucket, was used to load thawed clay into the scrapers. The other, equipped with a 4-yard cleanup bucket, was used for cleaning bedrock. An 82-30B Terex bulldozer with a U-blade was used to level dumping areas. In the 2001 mining season, the D9L and the TS24 scrapers remained in use at the site. The Bucyrus Erie 350 excavator with the 2½-yard bucket was used to establish drains or channels and to finish a bank cut. The 82-30B bulldozer was used to feed the wash plant. An FD50 Fiat Allis bulldozer with a U-blade and ripper was used for stripping. In 2002, the excavator was changed to a model 750 Hitachi and the wash plant was fed by a model UH-14 Hitachi.

WASH PLANT The wash plant used in 2001 was the one normally used at the Favron's Dominion Creek operation. It had a variable speed 42-inch by 21-foot belt feeder that fed to a 42-inch by 60-foot elevation conveyor. The conveyor fed to a 5-foot by 10-foot double screen deck with 1½-inch and ¾-inch screens. The plus ¾ inch material travelled out a 36-inch by 35-foot radial stacking conveyor. The minus ¾-inch material flowed down two 12-inch hoses to two 9-foot by 12-foot slick plates, which channelled material into six 36-inch by 16-foot runs equipped with expanded metal with Nomad matting for 16 feet and an additional section 2-foot by 4-foot 1-inch equipped with 1-inch riffles over Nomad matting. The expanded metal sections were set at a slope of 1½ inches to the foot. The riffle-equipped sections were set at a slope of 2 inches to the foot. There were three of the runs on each



The trommel used by Favron Enterprises for their operation on Last Chance Creek in 2002.

side of the plant. Water was supplied using a Berkley 12 by 10-inch pump powered by a 6V-71 Detroit Diesel engine at a rate of 2500 igpm. The process rate was 130 loose yards per hour. In 2001, when material left the wash plant it was run through a second trommel which was 5 feet in diameter and 30 feet long. The second plant was necessary in order to get a thorough wash due to the presence of gumbo bedrock.

In 2002, the wash plant used was a 6-foot 2-inch diameter by 30-foot long trommel with grouser bars spaced at ⅝ inch. Recovery was accomplished in three 3-foot by 8-foot long runs that fed into five 18-foot long runs with a total width of 16 feet. The first three runs were equipped with 1-inch angle riffles over Nomad matting. The lower four runs were equipped with expanded metal over Nomad matting. The pump used in 2002 was a 10 by 12-inch Peerless powered by a Caterpillar D333 engine. It provided approximately 2000 igpm of water, which was used to process 100 loose yards of material per hour.

GROUND DESCRIPTION In 2000 and 2001, the miners encountered up to 40 feet of black muck which was covered with White Channel material from previous miners' operations on the adjacent benches. On average, there were 20 feet of black muck over 5 feet of gravel of uniform size, in mostly thawed ground. Bedrock was made up of cubes and clay. In 2002, there was more coarse material encountered than in previous seasons.

MINING CUTS An area 900 feet long by 300 feet wide was stripped in 2000. No material was sluiced in 2000. In 2001, 5 feet of gravel and 4 feet of bedrock were sluiced. In 2002, a total of 10 feet of material was sluiced.

WATER SUPPLY AND TREATMENT Water was acquired from Last Chance Creek through a gravity ditch. Settling ponds were located out-of-stream. Approximately 90% of process water was recycled. The pond was 450 feet by 300 feet by 10 feet deep. In 2002, the pond size was 300 feet by 300 feet by 4

to 5 feet deep. The ponds were created by excavating and stockpiling pay gravels from a cut. The cut was then filled with water and used as a recycle pond.

GOLD The gold recovered from this site had a purity of 710 to 720 fine. A few nice coarser pieces were recovered in 2002. Some dendritic material was also recovered. The colour was a dull yellow.

COMMENTS Some of the black muck overburden stripped from the mine pit was spread over tailings from old hydraulic stripping operations. The vegetation in these areas is expected to improve quickly as a result.

**DISCOVERY PUP ON
LAST CHANCE CREEK 1150/14G**

Peter Erickson, Lee Bolster 63°59'N 139°07'W
Water Licence: PM95-043 1998, 1999, 2000
Bonanza-Hunker Placer Area **Site no. 32**

OPERATION/LOCATION Discovery Pup is a steep narrow tributary to Last Chance Creek. In his last year of mining at the site in 1998, Pete Erickson reprocessed some ground he had previously mined above the Last Chance Creek access road. In 1999, Lee Bolster worked at the site, putting in a cut downstream from the road. There was no mining activity at the site after 1999 other than site reclamation that was done by Favron Enterprises Ltd. in 2000.

EQUIPMENT/FUNCTION In 1998, a D8 Caterpillar bulldozer with a ripper was used for stripping overburden and a D6 Caterpillar bulldozer was used for sluicing. In 1999, Lee Bolster used two Caterpillar bulldozers, models D8 and D6, and a Caterpillar 225 excavator with a ¾-yard bucket.

WASH PLANT This operator used either a 30-foot trommel or a standard sluice box depending on the material being processed. The trommel included a 15-foot scrubbing section and a 15-foot screen. The sluice run fitted on the trommel was 12 feet long and from 3 to 5 feet wide and was fitted with punch plate and expanded metal. It was a single run box. Water was supplied at a rate of 1000 igpm using a Worthington 8-inch by 6-inch pump powered by a 4-53 General Motors engine. The process rate was 60 loose yards per hour.

GROUND DESCRIPTION The stratigraphic section in Discovery Pup is 30 to 40 feet of frozen black muck on bedrock. The bedrock varied from hard to soft gumbo clay. Last Chance valley at the mouth of Discovery Pup had overburden that was shallow in places and full of oldtimers' logs. The depth of the cut mined in 1999 by Lee Bolster was 15 feet, in a previously mined area. The sluice section typically averaged 3 feet in depth.

MINING CUTS In 1999, Lee Bolster's cut was 100 feet by 100 feet in area.

WATER SUPPLY AND TREATMENT Water for the operation was obtained from an in-stream pump pond on Last Chance Creek and delivered by pipeline 300 to 400 feet up Discovery Pup to the sluicing operation. Waste was treated in an out-of-stream pond on the left limit of Last Chance Creek prior to discharging to the pump pond. This allowed an estimated 50% recycle rate. The cut mined at the mouth of Discovery Pup recycled process water in a pond adjacent to the sluice set-up.

GOLD The purity of the gold on this creek was from 690 to 700 fine.

LAST CHANCE CREEK 1150/14G

Dietmar Gritzka and Last Chance Placers 63°59'N 139°07'W
Water Licence: PM01-251 1998, 1999, 2000, 2001, 2002
Bonanza-Hunker Placer Area **Site no. 33**

OPERATION/LOCATION Dietmar Gritzka started mining on claims 5 and 6 Above Discovery in 1998. These claims are located at the mouth of 5 Above Pup which is a left limit tributary to Last Chance Creek. In the first two years, all



Last Chance Placers operating on 5 Above Pup in 2002.

earth moving was done by Mr. Gritzka working on a part-time basis. Starting in the fall of the 2000 mining season, Last Chance Placers Ltd. took over the project with Mr. Gritzka working for them in 2001. In 2001 and 2002, the crew consisted of 3 miners who worked 10 to 10½ hours per day.

EQUIPMENT/FUNCTION In 1998 and 1999, two Caterpillar bulldozers, models D8K and D9H, both equipped with a ripper and a U-blade, and a Poclain excavator with a ¾ cubic yard bucket were used to strip overburden. In 2000, a D9G Caterpillar bulldozer was used to rip and push overburden, pay and tailings. A Caterpillar 235 excavator was used to strip frozen muck and feed the plant. In the fall of 2001 and part of March and April of 2002, an Hitachi twin engine excavator with a 7-yard bucket and two Terex 55-ton rock trucks were contracted from Max Fuerstner to strip muck overburden that was too wet to strip using conventional methods. After the trucks and the Hitachi excavator left the site, the 235 Caterpillar excavator and the D9 and D8 Caterpillar bulldozers were used. All 3 machines ripped frost. The 235 cast material to the bulldozers, which ramped the muck out of the cut.

WASH PLANT The wash plant consisted of a 5-foot by 11-foot single deck oscillating screen deck with ¾-inch punch plate. Undersize material flowed to a static 4-foot by 6-foot tray with 1-inch angle iron riffles over Nomad matting, then to two 4-foot by 8-foot oscillating trays with large expanded metal over Nomad matting. The screen deck was modified from a Clinton Creek asbestos screener. The pump used was an 8 by 6-inch Allis Chalmers, powered by a 6-cylinder John Deere diesel engine. The plant processed 80 to 100 loose yards of material per hour using 2000 igpm of water. In 2002, the process rate slowed down to 60 to 80 loose yards per hour due to the gummy nature of the material.

GROUND DESCRIPTION In 1998 and 1999, Mr. Gritzka started stripping material that was mostly thawed and dry with some sections of partially frozen black muck in preparation for future mining. Based on drilling performed by a previous owner, Mr. Gritzka was anticipating that there would be up to 50 feet of muck to remove. The stratigraphic section encountered in 2000 consisted of 5 feet of thawed muck over 1 foot of gravel and cobbles on cube-shaped bedrock. The cut mined in 2000 was at the mouth of 5 Above Pup. The sluice section was 1 foot of gravel and 5 feet of bedrock. The cut mined in 2001 was further upstream in 5 Above Pup. The ground consisted of 4 feet of thawed muck directly over blocky bedrock. The sluice section was 5 feet of bedrock. In 2002, there were 35 feet of muck over 5 feet of gravel on bedrock. The top half of the material was thawed and wet while the bottom was lightly frozen. The operation sluiced 5 feet of material. The area had been heavily worked

by oldtimers. The cut floor had been 85% worked out. The bedrock in this area was slate. Although gold didn't go more than 1 foot into bedrock, 3 feet were sluiced.

MINING CUTS No sluicing was performed in 1998 or 1999. One cut was mined in 2000. The cut was 400 feet long by 180 feet wide by 11 feet deep. In 2001, the cut mined was 400 feet long by 90 feet wide by 9 feet deep. In 2002, the cut was 275 feet by 400 feet and had an average depth of 35 feet.

WATER SUPPLY AND TREATMENT Process water was recirculated at a rate of approximately 75% using a 200-foot by 200-foot pond. Additional water was pumped from Last Chance Creek. No water was provided by 5 Above Pup. In 2002, Last Chance Creek was used as a conduit to transfer sluice effluent to two settling ponds located 1000 feet downstream on the left limit of the creek. Water was recirculated from the ponds back up to the sluice plant with overflows discharging into Last Chance Creek. During freshet and high water event, Last Chance Creek did not flow through the settling ponds but was turned back into its primary channel.

GOLD The gold was described as rough with some dendritic pieces. It had a purity of 680 to 690 fine.

LAST CHANCE CREEK AND TRIBUTARIES

115O/14G

Last Chance Placer Ltd.

63°59'N 139°07'W

Water Licence: PM97-052

1998, 1999, 2000, 2001

Bonanza-Hunker Placer Area

Site no. 34

OPERATION/LOCATION Lee Olynyk and his crew mined on 15 Above Pup and 8 Above Pup, which are left limit tributaries to Last Chance Creek. The cut widths on the tributaries were constrained by the width of the valleys. There were three miners who worked 10 to 10½ hours per day. In 2002, Last Chance Placers concentrated their efforts on 5 Above Pup under Dietmar Gritzka's water use licence PM 01-251.



Last Chance Placers on Last Chance Creek in August 2000. 5 Above Pup is in the foreground and 8 Above Pup is in the background.

EQUIPMENT/FUNCTION In 1998 and 1999, a Caterpillar 235 excavator was used to rip and strip frozen black muck overburden and feed the sluice plant. A Caterpillar D9G and a Caterpillar D8H bulldozer were used to rip and strip overburden, push pay to the plant and push tailings away. In 2000, a D9G Caterpillar bulldozer was used to rip and push overburden, pay and tailings. A Caterpillar 235 excavator was used to strip frozen muck and feed the plant. Hydraulic monitors were used on both 8 Above Pup and 15 Above Pup to remove some of the frozen muck, with effluent being settled in old cuts in the Last Chance Creek valley. In 2001, the D9G, the D8H and the 235 were used.

WASH PLANT The wash plant consisted of a 5-foot by 11-foot single deck oscillating screen deck with 3/4-inch punch plate. Undersize material flowed to a static 4-foot by 6-foot tray with 1-inch angle iron riffles over Nomad matting, then to two 4-foot by 8-foot oscillating trays with large expanded metal over Nomad matting. The screen deck was modified from a Clinton Creek asbestos screener. The pump used was a 6 by 5-inch Cornell pump, powered by a 6-cylinder Mitsubishi engine. The plant processed 100 loose yards of material per hour.

GROUND DESCRIPTION In 1998 and 1999, the stratigraphic sections were the same on both 8 Above Pup and 15 Above Pup. In 1998, the miners encountered 45 feet of frozen black muck overlying 3 feet of angular, poorly sorted cobbles and gravel on bedrock. The sluice section was 3 feet of gravel and 4 feet of bedrock on both pups. In 1999, there was 40 feet of frozen black muck over 3 feet of cobbles and gravel in each pup. The sluice section was the same as in 1998. In 2000, there was no mining on 15 Above Pup. The miners removed 30 feet of frozen muck to reach the 2 feet of gravel and cobbles and 5 feet of fractured bedrock which were sluiced on 8 Above Pup. In 2001, 25 feet of frozen muck covered the 1-foot depth of cobbles and 5 feet of fractured bedrock which were sluiced on 8 Above Pup. The cut mined on 15 Above Pup had 35 feet of frozen black muck over 3 feet of angular cobbles on bedrock. The sluice section on 15 Above Pup was 3 feet of cobbles and 5 feet of bedrock.

MINING CUTS The cut mined in 1998 on 15 Above Pup was 700 feet long by 95 feet wide. The 8 Above Pup cut was 230 feet long by 100 feet wide. The cuts mined in 1999 were 300 feet by 90 feet on 15 Above Pup and 400 feet by 100 feet on 8 Above Pup. In 2000, the cut on 8 Above Pup was 700 feet long by 40 feet wide. In 2001, the 8 Above Pup cut was 700 feet long by 30 feet wide, while the 15 Above Pup cut was 450 feet long by 90 feet wide.

WATER SUPPLY AND TREATMENT On 8 Above Pup, in 1998 and 1999, water was pumped using an 8 by 6-inch pump, powered by 6-cylinder John Deere diesel engine, from a pond

on the left limit of Last Chance Creek below the mouth of 8 Above Pup. In 1998, the pond was 50 feet by 90 feet. In 1999, the pond was 500 feet by 80 feet and there was no recycling of process water. In 2000 and 2001, a Cornell pump was used to pump 2000 igpm of water at this location. Process water was recycled at a rate of approximately 75% using a 400-foot by 200-foot pond.

On 15 Above Pup two pumps were employed in series to move 2000 igpm of water upstream from Last Chance Creek. The pipeline started at 12 inches in diameter and went down to 10 inches then 8 inches over a distance of 1 kilometre, raising the water approximately 600 feet. An 8 by 5-inch Cornell pump, powered by a 6-cylinder Mitsubishi engine, pumped from the return pond. An 8 by 6-inch high pressure pump, powered by a 6-cylinder John Deere diesel engine, boosted the water to the cut. Very little water was contributed by 15 Above Pup. In 1998, the recycle rate with a 60-foot by 100-foot pond was approximately 70%. In 1999, the recycle rate with a 400-foot by 60-foot pond was 50%. In 2001, the recycle pond was 300 feet by 100 feet and the recycle rate was 75%.

GOLD The purity of the gold from 15 Above Pup varied from 670 to 680 fine. The purity of the gold from 8 Above Pup varied from 680 to 690 fine. 15 Above Pup gold was described as angular and dendritic in form, while 8 Above Pup gold was described as smooth and dendritic. Fifty percent of the gold was +20 mesh in size.

HUNKER CREEK		116B/3
Tamarack Inc.		64°00'N 139°05'W
Water Licence: PM95-053		1998
Bonanza-Hunker Placer Area		Site no. 35

OPERATION/LOCATION Tamarack Inc. continued to operate a large-scale mine on Paradise Hill, a left limit bench of Hunker Creek upstream of 80 Pup through the 1998 season. A crew of 13 miners and two camp staff ran the mine. The mining at this location was put in temporary closure after 1998 and part of the operation was moved to the Indian River in 1999.



Tamarack Inc. on Hunker Creek.

EQUIPMENT/FUNCTION The property was stripped and sluiced using a fleet of five Caterpillar D9 bulldozers and eight Caterpillar scrapers. Two Caterpillar 966 loaders and miscellaneous other equipment was also available when needed. A mobile auger drill has been widely used for proving pay values on this property.

WASH PLANT A 90-cubic-yard hopper, with a 4-foot by 16-foot apron feed, fed pay gravel onto a variable speed conveyor 4 feet wide by 60 feet long. The conveyor fed a trommel 8 feet in diameter by 60 feet long. The last 6 feet of the trommel classified pay to ¾-inch minus. The classified pay ran down a 2-foot wide by 45-foot long chute to a distributor that divided the slurry into six oscillating runs 3 feet wide by 20 feet long. Expanded metal and Nomad matting lined the runs. An 10-inch by 10-inch Crane Demming pump, powered by a Caterpillar D398 engine, lifted the water 350 feet up onto Paradise Hill for sluicing. Approximately 3000 igpm was needed to process approximately 300 cubic yards of gravel per hour.

GROUND DESCRIPTION Paradise Hill is a large White Channel deposit. The ground varied in depth from 120 feet to 140 feet. Domes and depressions in the bedrock have continued to provide great variation in the overall depth. A layer of overburden 80 feet deep was found overlying 10 feet of mud and an average of 40 feet of gravel. All of the gravel was sluiced.

MINING CUTS Four cuts were mined throughout the 1998 season. They measured approximately 900 feet by 300 feet,

1200 feet by 180 feet, 300 feet by 200 feet and 150 feet by 80 feet.

WATER SUPPLY AND TREATMENT Water for sluicing was pumped from an in-stream reservoir on Hunker Creek up onto Paradise Hill for sluicing. The pay gravels were sluiced over the rim into an out-of-stream settling complex which is located along the left limit of Hunker Creek. The treated effluent re-enters Hunker Creek by both direct and seepage discharge above the pump pond, and is then largely recycled.

GOLD The gold was reported to be primarily fine-grained and rough. The purity was 830 fine.

HUNKER/HESTER CREEKS		1150/14
Emile Levesque (Big Red Mining)	63°58'N 139°00'W	
Water Licence: PM96-037	1998, 1999, 2000, 2001, 2002	
Bonanza-Hunker Placer Area	Site no. 36	

OPERATION/LOCATION Emile Levesque continued mining in the general area of Hester Creek, a left limit tributary of Hunker Creek. In 1998, the mining was done on Paradise Hill and on the right limit side pay of Hester Creek. A cut on Hester Creek was mined in the spring of 1999 before moving up onto Nugget Hill to sluice the rim gravels. Old tailings and sections of virgin gravels were processed on Nugget Hill throughout 2000 and most of 2001. A section of Hester Creek that had been partially stripped previously was mined in the fall of 2001. Due to a lack of water on Nugget Hill from the Independence Creek gravity ditch, the operation



Emile Levesque on Hester and Hunker creeks.

was moved to the mouth of Independence Creek in 2002. Emile Levesque and a single employee usually worked a single shift 12 to 14 hours per day.

EQUIPMENT/FUNCTION A Caterpillar D6 bulldozer, a Caterpillar 950 loader, a Caterpillar 966 loader and a 260 Bantam excavator were used in 1998 and 1999. The 966 loader was sold and was not used in 2000 and 2001. The loaders were used to feed the sluice plant and for hauling pay gravels. The excavator was used to feed the sluice plant on Nugget Hill and for scraping the cut face and maintenance of drains. The bulldozer was used to scrape the cut faces and for various small jobs.

WASH PLANT The wash plant consisted of a dump box leading into a 5-foot wide by 11-foot long shaker screen outfitted with 1¼-inch punch plate. The 1¼-inch minus classified gravels were then sluiced through a 16-foot long single run which tapered from 33 inches down to 24 inches before being distributed onto three oscillating sluice runs 4 feet wide by 8 feet long. The upper single run was lined with 2-inch angle iron riffles. Matting was not used except for a small section below the shaker plant which was found to capture a good percentage of the gold. The oscillating runs were lined with expanded metal and Nomad Matting. A 6-inch by 8-inch Morris pump, powered by a Caterpillar 3306 engine or a 360 Cummings engine, supplied the estimated 2500 igpm needed to process 150 cubic yards per hour on Hester Creek and Paradise Hill. When sluicing tailings on Nugget Hill the production was increased to 200 cubic yards per hour.

GROUND DESCRIPTION The ground on Hester Creek varied in depth from 40 feet deep on the right limit to over 50 feet deep in the centre of the creek. Approximately 32 to 40 feet of black muck overlies 8 feet of gravel. Bedrock tended to be solid and hard. All of the gravel was sluiced. The sluicing on Paradise Hill was restricted to washing the remaining gravels and oldtimer's tailings along the rim. There was approximately 3 feet to 6 feet of White Channel gravels on top of decomposed graphite bedrock. All of the gravels, and up to 2 feet of the bedrock, were sluiced. The rim of Nugget Hill was sluiced in the fall of 1999. As on Paradise Hill, the rim was found to range from 3 feet to 6 feet deep with decomposed bedrock. All the White Channel gravel, and up to 2 feet of the decomposed bedrock, was sluiced.

MINING CUTS A large cut (approximately 700 feet long by 50 feet wide by 40 feet deep) along the right limit of Hester Creek was monitored in 1998 and 1999. Approximately 45,000 cubic yards were sluiced on Nugget Hill in the fall of 1999. Tailings from several locations on Nugget Hill were processed throughout 2000 and part of 2001. Approximately 30,000 cubic yards were processed from Hester Creek in the fall of 2001. An area at the mouth, along the right limit of Independence Creek, was bulk tested, and a cut was

processed along the left limit of Independence Creek in 2002. Due to poor results, the operation was shut down on Independence Creek prior to the end of the season.

WATER SUPPLY AND TREATMENT Water for sluicing and monitoring on Hester Creek and Paradise Hill came from an out-of-stream reservoir near the mouth of Hester Creek. Make-up water was brought in from Hunker Creek when needed. The final effluent treatment occurred in large out-of-stream settling ponds in the Hunker Creek valley or in the pump pond. When sluicing on Nugget Hill the water was pumped from a ditch beside Hunker Creek up onto Nugget Hill. The effluent was carried over the rim to the large out-of-stream reservoir used for sluicing on Hester Creek. No visible discharge could be seen. Sluice water at Independence Creek came from a large reservoir created by the mining done by Tony Kosuta over the last several years. A drain to old dredge tailings provided the effluent treatment.

GOLD The gold varied a great deal depending on where it was mined. Gold from Hester Creek tended to be fine and ranged from an average purity of 650 fine to a high of 760 fine. The gold on Paradise Hill and Nugget Hill had a higher purity with an average of 820 fine. Nuggets up to 1 ounce were found on Nugget Hill.

HUNKER/HESTER CREEK		115O/14
The Nugget Factory Inc.		63°58'N 139°04'W
Water Licence: PM00-209		2001, 2002
Bonanza - Hunker Placer Area		Site no. 37

OPERATION/LOCATION The Nugget Factory ran an operation at the mouth of an unnamed tributary along the left limit of Hester Creek in 2001. The late Mr. Tony Fritz had previously mined at this location. Michel Filion of The Nugget Factory Inc. concluded an agreement with Emile Levesque in 2002 to mine under Mr. Levesque's licence on 12 of the placer claims which the company was purchasing. The operation then relocated to Hester Creek. The company worked the ground from July to September when it shut down due to poor gold recovery.

EQUIPMENT/FUNCTION A D9G Caterpillar bulldozer along with a D6C Caterpillar bulldozer were employed at this site stripping cuts and various other duties. A Linkbelt 120 Loader and a Caterpillar 966F excavator were also used to build settling facilities and feed the sluice plant.

WASH PLANT The mobile wash plant was a 4 by 10-foot long oscillating screen deck covering pulsating riffles. A lever lifts the riffles and screen deck upward for the purpose of clean-ups. A 6 by 6-inch Gorman Rupp trash pump, powered by a four cylinder John Deere diesel engine, capable of 1800 igpm processed about 60 cubic yards per hour. Jigs were used for final clean-ups.



The Nugget Factory, Hester Creek.

GROUND DESCRIPTION The ground descriptions for Hester and Hunker creeks can be found under Mr. Levesque’s licence (site no. 36).

MINING CUTS The operator did not supply the number of the mine cuts made in time to be included in this publication.

WATER SUPPLY AND TREATMENT Out-of-stream settling facilities were used at both locations, with no discharge at the lower Hester Creek site. Old cuts of Gary Crawford’s at the mouth of Hester Creek were used. Water for sluicing came from an out-of-stream reservoir near the mouth of Hester Creek, with make-up water being pumped from Hunker Creek. Final effluent treatment occurred in large settling ponds on Hunker Creek.

GOLD While no information was supplied from the operator other than poor recovery, the gold from Hester Creek is known to be small-particled, shiny in colour and has a fineness of 680.

INDEPENDENCE CREEK 1150/14

Peter Gould 63°58'N 139°02'W
 Water Licence: PM95-062 1998
 Bonanza-Hunker Placer Area **Site no. 38**

OPERATION/LOCATION Peter Gould and one employee mined on Nugget Hill, a left limit bench of Hunker Creek between Independence Creek and Hester Creek in 1998. The operation was moved to Hattie Gulch the following season.

EQUIPMENT/FUNCTION A Caterpillar D7F bulldozer was used for stripping overburden and gravel, stockpiling pay gravel, and maintaining settling ponds. A Caterpillar 930 loader was used to feed pay gravel into the wash plant and for removing tailings.

WASH PLANT A hopper fed into a scrubber (trommel) 4 feet in diameter by 30 feet long. The 1-inch minus classified pay

was sluiced in two 4-foot wide by 20-foot long oscillating runs. Nomad matting, expanded metal and some riffles lined the sluice runs. A Cornell 8-inch by 6-inch pump powered by a John Deere motor supplied the 1500 igpm needed for sluicing approximately 45 cubic yards per hour.

GROUND DESCRIPTION The bench gravel deposit was approximately 30 feet deep with only a thin organic layer on top. All of the gravel and about 1 foot of decomposed bedrock was sluiced.

MINING CUTS One small cut was mined on Nugget Hill in the same area that has been mined since 1995. Total yardage sluiced in 1998 decreased due to major equipment breakdowns.

WATER SUPPLY AND TREATMENT Water from Independence Creek was brought to Nugget Hill by a 2-mile long gravity ditch to a series of recycle ponds. No discharge except by seepage occurred.

GOLD The gold was reported to be rough with the majority in the 16 mesh size. The purity ranged from 850 to 910 fine. Clean-ups were done with a long tom and screens.

COMMENTS The ditch from Independence Creek to Nugget Hill was built by Peter Gould’s grandfather, Robert Gould, in 1907. Peter’s father, John Gould, also mined this ground for many years. The property was sold after the 1998 season.

INDEPENDENCE CREEK 1150/14

Anton Kosuta 63°59'N 139°02'W
 Water Licence: PM99-098 1998, 1999, 2000, 2001, 2002
 Bonanza-Hunker Placer Area **Site no. 39**

OPERATION/LOCATION From 1998 through 2002, Tony Kosuta continued to operate a small-scale operation near the mouth of Independence Creek, a left limit tributary of Hunker Creek. Tony Kosuta ran the mine by himself most of the time.



Anton Kosuta, Independence Creek.

EQUIPMENT/FUNCTION A Caterpillar D5B bulldozer, a Caterpillar D6 bulldozer, a Caterpillar 941 track loader and a Caterpillar 930 loader were all used during the mining of this property. The D5B bulldozer and 941 track loader were used for most of the stripping and for clearing tailings. The 930 loader was used for feeding the box, and tailings work as well. When larger jobs were required they were contracted out.

WASH PLANT An 8-foot wide by 14-foot long dump box tapers down to a 3-foot wide by 24-foot long single sluice run. The dump box and sluice run is lined with Nomad matting and angle iron riffles. A Paco 10 by 8-inch pump, powered by a Caterpillar D330 engine, supplied the estimated 2000 igpm needed to process between 15 and 30 cubic yards per hour.

GROUND DESCRIPTION As mining progressed upstream on Independence Creek the overall depth decreased. The ground averaged 18 feet deep throughout 1998 and into 2000 with 10 feet of frozen black muck overlying 8 feet of gravel. In 2001, the depth decreased to 12 feet with muck/gravel along with boulders on the bedrock. All of the gravels and a small amount of the bedrock were sluiced. The ground mined in 2002 averaged 16 feet deep. Bedrock was solid and hard.

MINING CUTS A cut measuring 150 feet long by 70 feet wide by 25 feet deep, and a cut measuring 30 feet long by 15 feet wide by 18 feet deep were mined in 1998 and 1999. Mining continued upstream on Independence Creek at a similar rate throughout 2000 and 2001 with one cut mined each year. A cut approximately 40 feet long by 35 feet wide was sluiced in 2002.

WATER SUPPLY AND TREATMENT An in-stream reservoir was constructed on Independence Creek and the water was piped to the sluice plant with a gravity system. Water was also available to be recycled from the settling facility constructed in the old mine pit at the mouth of Independence Creek. An additional settling area was being constructed in 2001 utilizing an area of old dredge tailings.

GOLD The gold was reported to be mainly flat and fine. A few small nuggets were recovered. The purity of the gold was approximately 775 fine.

HUNKER CREEK

1150/15

Graham and Geoffrey Jacobs
 Water Licence: PM01-233
 Bonanza-Hunker Placer Area

63°59'N 139°00'W
 2002
Site no. 40

OPERATION/LOCATION Geoffrey Jacobs operated on a right limit bench of Hunker Creek between Bee Gulch and Trilby Creek through the 2002 season. Two miners and one camp person operated a single 12-hour shift.

EQUIPMENT/FUNCTION A Caterpillar D9H bulldozer was used for stripping overburden, pushing up the pay gravels, and reclamation. A Kobelco 907 excavator was used to feed the wash plant and an Hitachi UH07 excavator removed tailings and helped in the stripping operations.

WASH PLANT A wash plant obtained from Clinton Creek was used. Pay gravels were loaded into a hopper which fed into a 5-foot by 10-foot oscillating screen deck that classified the gravels to -¾ inch. The classified pay gravels then passed over four boil boxes before being washed through 2-foot by 8-foot sluice runs equipped with hydraulic riffles. The oversize material was carried off and stacked by a 40-foot long conveyor. A 3-inch by 4-inch Indeng pump, powered by a 120 hp engine, pumped water from Hunker Creek up onto the bench when make-up water was needed. A 6-inch by 6-inch Ajax pump supplied water to the wash plant for sluicing approximately 80 cubic yards per hour.

GROUND DESCRIPTION The mining was done on a south-facing exposed bench of Hunker Creek. All of the ground was thawed. An average of 2 feet of soil overlays between 4 and 8 feet of gravel, followed by 6 to 8 feet of soil and then more gravel (up to 6 feet deep) until bedrock. Bedrock tended to be decomposed. The overall depth varied from 6 feet on the rim to as much as 35 feet at the back of the cut. The lower 3 to 6 feet of gravel and the first foot of bedrock were sluiced.

MINING CUTS A total of five cuts were prepared and sluiced during 2002. Two of the cuts were 450 feet by 90 feet and three of the cuts were 150 feet by 90 feet.

WATER SUPPLY AND TREATMENT A full recycle operation was set up on the bench. Make-up water was pumped from an in-stream reservoir on Hunker Creek up into a series of ponds on the bench. The sluice water was treated on the bench and make-up water was only pumped when required. No direct discharge back to Hunker Creek occurred.



Sluice plant on Hunker Creek.

GOLD The gold was reported to be very fine-grained and flat. The purity was 815 fine.

COMMENTS The equipment was moved onto the property in the fall of 2001. The operation mined through the entire 2002 season. The operation was shut down and the reclamation was started in the fall of 2002 due to poor results.

HUNKER CREEK

1150/15

David Gould 63°58'N 139°00'W
Water Licence: PM01-237/PM01-245 1998, 1999, 2000, 2001, 2002
Bonanza-Hunker Placer Area **Site no. 41**

OPERATION/LOCATION David Gould and Ian Thomas mined as partners on Hunker Creek at the mouth of Colorado Creek in 2000 and 2001 and just downstream of Not Much Gold Creek in 1998, 1999 and 2002. A small cut was mined and some testing was done by Paul O'Brien and Gordon Watson on the claims just downstream of Independence Creek in 2002. Due to poor results at that location the site was reclaimed and abandoned.

EQUIPMENT/FUNCTION A Caterpillar D9 bulldozer was used for stripping overburden and dredge tailings, and for excavating pay gravel. A Caterpillar 950B loader was used to haul pay gravel from the mine pit to the wash plant. A Komatsu PC220 excavator was used to dig pay gravel and to feed the wash plant.

WASH PLANT A hopper fed the pay gravel into a 5-foot diameter by 15-foot long trommel outfitted with ½-inch screen. The classified pay gravels were washed through sluice runs 10 feet wide by approximately 5 feet long. The first 29 inches were outfitted with hydraulic riffles and the remainder of the run used expanded metal and Nomad matting. The oversize material was stacked with a 28-foot long by 3-foot wide conveyor. A Gorman Rupp 6-inch water pump, powered by a Deutz engine, supplied the 700 igpm needed to process between 25 and 60 cubic yards per hour.

GROUND DESCRIPTION In 1998, 1999 and 2002, the area being mined (Not Much Gold Creek area) had been previously dredged, which left up to 10 feet of coarse tailings on top of 8 feet of sandy gravel and then 12 feet of mud and silt on the bottom. Below this was mostly decomposed bedrock with a few patches of gravel which were missed by the dredge. This bottom gravel plus 2 or 3 feet of bedrock were processed. In 2000 and 2001, the area mined (Colorado Creek area) was not previously mined with heavy equipment and consisted of 20 to 25 feet of organic mud and sand on top of a gravel layer about 5 feet deep. The bottom 3 feet of gravel, plus about 2 feet of bedrock, were sluiced.



David Gould on Hunker Creek.

MINING CUTS In 1998, approximately 3500 square yards of bedrock were mined. In 1999, about 3000 square yards of bedrock were mined in three cuts. In 2000, about 3500 square yards of bedrock were mined and in 2001, two cuts were mined with a total of about 2300 square yards of bedrock mined.

WATER SUPPLY AND TREATMENT Mining cuts were excavated below the water table and had to be pumped out while pay gravels were being excavated and stockpiled for sluicing. After the pay gravels were removed, the pits were allowed to flood and then were used for recycling with no direct discharge to Hunker Creek. Back filling of the cuts occurred as the pay gravels were sluiced back into the cut.

GOLD Most of the gold was reported to be fine, flat and smooth. The purity of the gold was 820 fine.

HUNKER CREEK

1150/15

Jack and Ian Fraser 63°58'N 138°58'W
Water Licence: PM96-066 1998
Bonanza-Hunker Placer Area **Site no. 42**

OPERATION/LOCATION This operation downsized considerably. Only Jack and Ian Fraser performed some work in 1998, with Ian Fraser's sons, Douglas and Joey, pinch-hitting on occasion. The work area in 1998 was located on the left limit of Hunker Creek approximately a quarter of a mile upstream from the tributary Not Much Gold. Sluicing of stockpiled material and mining a small cut was the only activity for this last season.

EQUIPMENT/FUNCTION The Caterpillar 225 excavator was used to strip and feed the sluice plant. A 950 Caterpillar loader hauled material away from cut. A D8H Caterpillar bulldozer was employed in various functions including reclamation.



Jack and Ian Fraser on Hunker Creek.

WASH PLANT The wash plant in use at this time was a 14 by 5-foot double deck screening unit which classified the pay to 9-inch minus, after which it was fed into an 8 by 22-foot long sluice box divided into four runs. One and one-quarter-inch angle iron riffles were installed in the first 4 feet of the runs. Heavy expanded metal lined the next 12 feet, followed by 6 feet of the original 1¼-inch riffles. The sluice runs were lined for their entire length with Nomad matting. Water for sluicing was supplied by an 8 by 6-inch Monarch pump, powered by a 671 Cummings diesel engine, capable of 1500 igpm, which processed about 40 cubic yards per hour.

GROUND DESCRIPTION This old dredge tailings site revealed coarse tailings 6 feet below creek level. Dredge slickings were encountered 21 feet down. The ground then turned to mud for the next 10 feet before bedrock was located. The cut mined along the left limit averaged from 4 to 20 feet deep. Moving downstream towards the settling ponds, the operators lost too much grade and found too much mud to be able to continue. The Frasers sluiced the bottom 5 feet of gravel and 2 feet of the soft unconsolidated schist typical of this area. Gravels were uniform in size with no large rocks.

MINING CUTS Approximately 5,000 cubic yards were processed through the wash plant. A small cut 130 by 25 by 15 feet deep was mined on the side hill.

WATER SUPPLY AND TREATMENT Out-of-stream pump ponds were created from old mining cuts on Hunker Creek to supply the wash plant. Effluent was treated in out-of-stream settling ponds with no discharge to the creek.

GOLD Gold recovered at this site had a fineness of 800 to 810. Most of the particle size was smaller than 10 mesh minus. No coarse nuggets were recovered.

COMMENTS Reclamation of some of the new workings was performed with the Caterpillar D8H in combination with the Caterpillar 225 excavator, working the stockpiled overburden into the contoured tailings. It was noted by the operator that older workings were already revegetating from work done five or six years previously.

GOLD BOTTOM CREEK		1150/15
Mogul Gold Placers Ltd.		63°57'N 138°58'W
Water Licence: PM98-025		1998, 1999, 2000, 2001, 2002
Bonanza-Hunker Placer Area		Site no. 43

OPERATION/LOCATION In 1998, David Millar of Mogul Gold Placers Ltd. mined the lower right limit of Gold Bottom Creek. Paul O'Brien and Gordon Watson of Colonial Gold (see Colonial Gold) started operating under this licence as well in 1999. A joint venture was formed to test claims on the left limit of Hunker Creek approximately 1 kilometre above the mouth at Gold Bottom Creek. David Millar continued to sluice stockpiled materials on Gold Bottom proper and to mine the right limit of Gold Bottom opposite Soda Pup.

EQUIPMENT/FUNCTION In 1998, Mogul Gold used two D8H Caterpillar bulldozers and a Koehring 666 excavator. David Millar continued his right limit stripping operation, using a monitor to thaw the frozen black muck, and by 2002 was using an EX200 Hitachi excavator and a 966C Caterpillar loader as well.

WASH PLANT Mogul Gold used a 6-inch pump in 1998, which was upgraded to a 10 by 8 pump, powered by an 871 Jimmy engine, capable of pumping 2500 igpm. In 2002, this was replaced by a Gordon Rupp 6-inch pump, powered by a 4 cylinder Lister engine, capable of 1000 igpm and approximately 50 cubic yards were processed per hour. Sluicing was accomplished with a 5-foot trommel which had a 30-foot tailings stacker, a 10-foot wide oscillating run with 4 feet of hydraulic riffles and 4 feet of expanded metal. For the 1999 test program on Hunker Creek, a 3-foot rotary trommel and a Ross box were used. A 6 by 6 WAI pump, powered by a Detroit diesel engine pumping 300 igpm was employed for this sluicing venture, processing 30 yards per hour. Final cleanups were processed with a wheel and a long tom.

GROUND DESCRIPTION The Hunker Creek area was dredged in the past. It was tested in the hope of finding any gravels or bedrock that might have been missed. Fifteen to 25 feet of frozen black muck overlay about 3 feet of gravels intermixed with overburden which was sluiced. The right limit face of Gold Bottom Creek opposite Soda Pup was moved back about 20 feet and the overburden encountered ranged from 15 to 35 feet deep by the end of 2002.

MINING CUTS In 1998, Mogul Gold mined an area 300 by 100 feet. A 30 by 80-foot test cut was excavated and sluiced on the Hunker Creek test area in 1999. On the 1 A/M claim at Hunker and Gold Bottom, a further cut, 500 by 40 by 23 feet, was excavated in 2001. A total of approximately 20,847 cubic yards were sluiced in a second joint venture with Colonial Gold. Mogul Gold monitored and stripped an area 250 feet long by 20 feet by 35 feet deep at the same time upstream. By 2002, two more cuts were taken out totalling about 300 by 100 feet.

WATER SUPPLY AND TREATMENT Water was acquired from Gold Bottom Creek, Soda or Hunker Creek and returned through a series of settling ponds and ditches. Both out-of-stream and in-stream settling ponds were used, averaging in size from about 150 to 200 feet long by 100 feet wide. The creek was diverted to the right limit or left limit channel as required. An out-of-stream settling pond was constructed on Hunker Creek for test sluice purposes.

GOLD Little gold was recovered from the Hunker Creek site. It was generally dull, fine-grained and no nuggets. The gold assayed out at about 820. On Gold Bottom, the gold was small and flat with very few nuggets and a fineness of 785. Over 50% of the gold was -30 mesh with very few nuggets.

COMMENTS Reclamation of the Hunker Creek test area included contouring, sloping and creek channel stabilization. As mining may not be finished here a small settling pond has been left in place. The 1 A/M claim at the mouth of Gold Bottom has been completely reclaimed.

ONTARIO GULCH

1150/15

Pay Streak Placers 63°57'N 138°58'W
Water Licence: PM01-229 1999, 2000, 2001, 2002
Bonanza-Hunker Placer Area **Site no. 44**

OPERATION/LOCATION Richard Semple and Byron Bottle began testing this property in 1999. In 2001, a water licence was obtained since results of the drilling were promising. There is no camp set up as the location is only 45 minutes out of Dawson City.

EQUIPMENT/FUNCTION Testing in 1999 was accomplished using a 6-inch Augur drill. In 2000, the operators acquired a 1¼-inch Hitachi Hammer drill and using it in combination with Gel dynamite, blasted 2-foot rounds down to bedrock. A 6 by 12-foot long tom was used to test gravels. A D9G Caterpillar bulldozer with a U-blade and a 931 Caterpillar loader with a ¼-yard bucket were brought on-site in 2001 for stripping and feeding the sluice plant.

WASH PLANT A 3 by 6-foot shaker box with ¾-inch punch plate and a 2- by 8-foot sluice run equipped with 1¼-inch

riffles was moved onto the property for the 2002 season. The pump is yet to be acquired as no sluicing was done in 2002.

GROUND DESCRIPTION The stratigraphy of this area is composed of 12 to 16 feet of moss and black muck, intermixed with an old forest layer about 1¼ feet thick. A 4 to 6-foot angular gulch gravel layer contains some large quartz boulders. Bedrock is blocky, composed of green muscovite, feldspar and quartz schist. The ground is largely permafrost.

MINING CUTS Due to a delay in the water licence process, the operators were unable to strip until late fall. An area 60 by 100 feet and approximately 6 feet deep was opened up to thaw and a start made on the bedrock drain. The bedrock drain and additional stripping was done in 2002, covering an area 1125 feet long by 75 feet wide and 4 feet deep.

WATER SUPPLY AND TREATMENT Construction of settling ponds will be done in 2003. Water will be pumped into a reservoir for sluicing purposes and settled out prior to its return to Gold Bottom Creek. As Ontario Gulch is fairly narrow, the operator has been licenced for in-stream works including a cross-valley dam if required. Cleanups will be done with a two-cell pulsating jig.

GOLD Coarse gold was recovered during testing, but until mining actually begins, the average particle size, quality and fineness will not be known.

COMMENTS The operators uncovered a few old shafts and three old drift portals on the bench in upper Ontario Gulch.

GOLD BOTTOM CREEK

1150/15

Colonial Gold Joint Ventures 63°57'N 138°58'W
Water Licence: PM98-025 1998, 1999, 2000, 2001, 2002
Bonanza-Hunker Placer Area **Site no. 45**

OPERATION/LOCATION Paul O'Brien and Gordon Watson of Colonial Gold started operating under this licence in 1999. A joint venture was formed to test claims on the left limit of Hunker Creek approximately 1 kilometre above the mouth at Gold Bottom Creek. During the same season, Colonial Gold set up an operation upstream on Gold Bottom Creek, employing four miners and running two 12-hour shifts. Due to the proximity of this operation to town, a camp was not set up. In 2000, Colonial Gold increased to five miners but ran only one 12-hour shift. By 2001, Colonial Gold had moved about 3 to 4 kilometres upstream on Gold Bottom and also mined the 1 A/M claim in another joint venture with Mr. Millar at the confluence of Hunker Creek and Gold Bottom Creek. Colonial Gold wound down this operation in 2002 and is seeking other ground for future mining.

EQUIPMENT/FUNCTION In 1999, Colonial Gold moved onto the site their equipment, which included one EX200 Hitachi



Colonial Gold's operation on Gold Bottom Creek.

excavator to strip and tail out, and a second one to feed the plant. Intermittently, two D8 Caterpillar bulldozers were used to strip the ground. To perform the test work on Hunker Creek, a Caterpillar front-end loader was employed. In 2000, they increased equipment to 3 Hitachi EX200 excavators and a leased D9 Caterpillar, using the D9 and an excavator to strip, a second excavator to tail out and the third excavator to feed the plant. 2001 saw a reduction in equipment to the two excavators and a 980 Caterpillar loader. In 2002, equipment was a Caterpillar D8K bulldozer leased for stripping and the two EX200 Hitachi excavators which also stripped material and loaded the plant. The Caterpillar 980 loader continued to be used in the recovery of pay gravels.

WASH PLANT Colonial Gold used a 5-foot rotary trommel with a 40-foot stacker and hydraulic riffles. The pump was a Cornell 6 by 6 inch, powered by a Perkins 6/354 diesel, capable of pumping 600 igpm. Approximately 75 cubic yards were processed per hour. For the test program on Hunker Creek, a 3-foot rotary trommel and a Ross box were used. A 6 by 6 WAI pump, powered by a Detroit diesel engine, pumping 300 igpm was employed for this sluicing venture, processing 30 cubic yards per hour. Jigs were used for the final clean-ups.

GROUND DESCRIPTION The Hunker Creek area was dredged in the past. It was tested in the hope of finding bedrock or gravels that might have been missed. Twenty to 30 feet of material composed mostly of gravels intermixed with overburden was sluiced. The side pay on Gold Bottom mined by Colonial Gold in 1999 had very little frozen ground and only minimal overburden. In 2000, as they continued to mine upstream, they encountered anywhere from 6 to 30 feet of black muck covering 3 feet of gravel. In 2001, the upstream mine site had approximately 25 feet of black muck over 10 feet of gravel, whereas the area mined at the mouth on Hunker revealed 20 feet of black muck over 3 feet of gravel. The mining cut in 2002 showed an increase in the

black muck level to an average of 45 feet (anywhere from 38 to 54 feet) overlaying from 2 to 8 feet of gravels.

MINING CUTS A 30- by 80-foot test cut was excavated and sluiced on the Hunker Creek test area. In 1999 and 2000, Colonial Gold moved about 300,000 cubic yards of material. In 2001, three more cuts were made. The upstream cut was approximately 500 by 60 by 35 feet deep. A second cut measured 600 by 60 by 35 feet in depth, and on the 1 A/M claim at Hunker and Gold Bottom, a further cut 500 by 40 by 23 feet was excavated. A total of approximately 20,847 cubic yards were sluiced. The cut in 2002 was 900 by 120 feet, out of which an average 3 feet of gravels and unconsolidated bedrock was sluiced.

WATER SUPPLY AND TREATMENT Water was acquired from Gold Bottom Creek and returned through a series of settling ponds and ditches. The creek was switched from the left limit to the right limit channel as required. An out-of-stream settling pond was constructed on Hunker Creek for test sluice purposes.

GOLD Little gold was recovered from the Hunker Creek site. It was generally dull, fine-grained and no nuggets, assaying out at about 820. On Gold Bottom, the gold was small and flat with very few nuggets and a fineness of 785.

COMMENTS Colonial Gold noted that the only thing consistent about placer gold recovery in Gold Bottom Creek was its inconsistency. As to the test cut on Hunker Creek, the scarcity of gold recovered was a tribute to the efficiency of the dredges. In addition, it was the first time Mr. O'Brien and Mr. Watson had encountered an area where the oldtimers had steamed their way down. Large sections of the area mined had literally been "steam-cleaned" which considerably reduced the profit from the operation.

GOLD BOTTOM CREEK		1150/15
Alfredo Aimola		63°54'N 138°58'W
Water Licence: PM98-013		1998, 1999, 2000, 2001, 2002
Bonanza-Hunker Placer Area		Site no. 46

OPERATION/LOCATION Alfredo and Sergio Aimola began mining the hillsides of Gold Bottom Creek and Gold Bottom Gulch in 1998, running one 10-hour shift per day. In 2000, this operation downsized to just Alfredo Aimola. Mr. Aimola also mined some of the intervening claims owned by Don Donis downstream of Soap Creek by agreement in 2001.

EQUIPMENT/FUNCTION A Caterpillar D8K bulldozer with a U-blade and ripper, 235 excavator and a 988 loader were used to strip the hillsides to allow thawing of permafrost. The 235 excavator and a monitor were used to clear away the black muck which was stockpiled for reclamation. Pay dirt was pushed up with the D8K which was delivered to the sluice

plant via the 988 loader. An additional Caterpillar 980C wheeled loader with a 5½-yard bucket was employed in 2002.

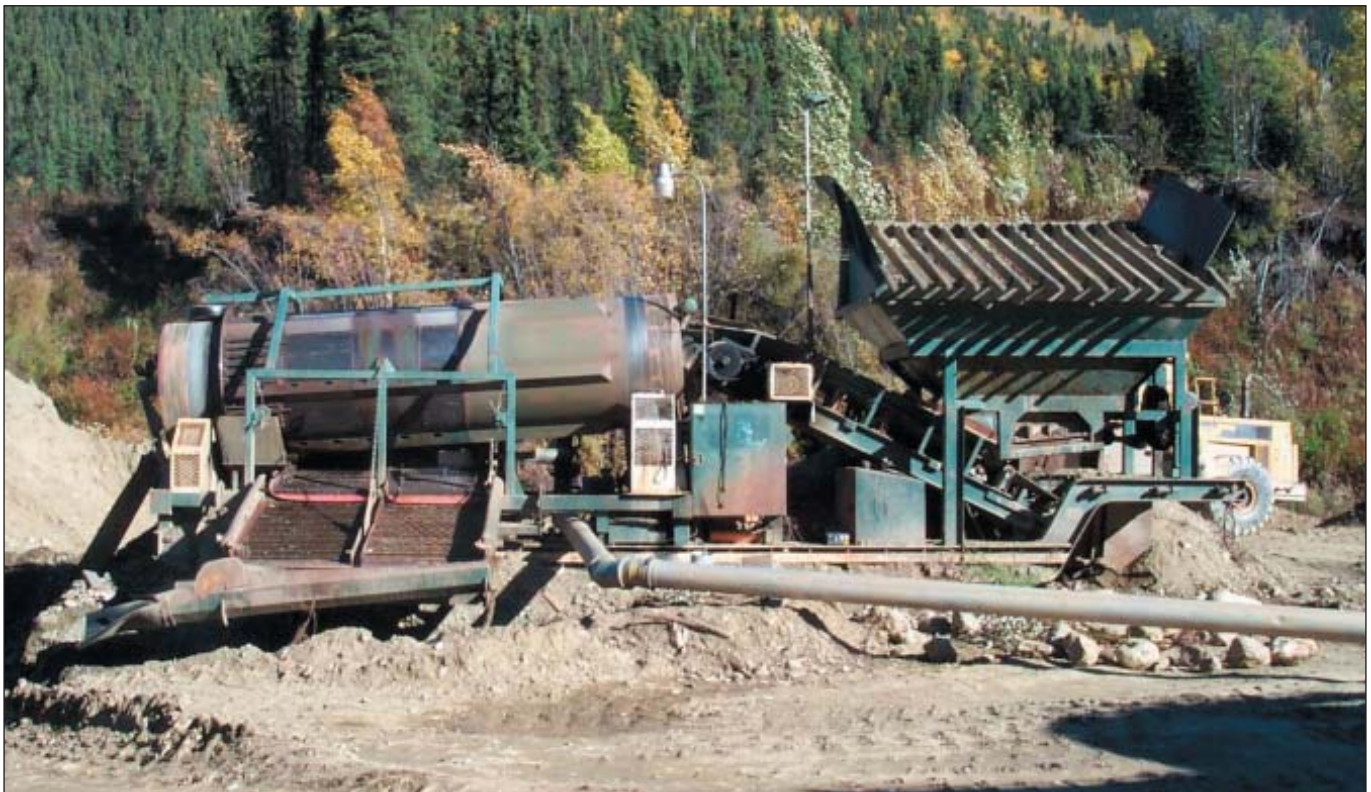
WASH PLANT A dump box equipped with a shuffle board and conveyor belt was used to feed material to a trommel, classified to ¾ inch. The pay was then sluiced through two 4- by 8- and one 2- by 8-foot sluice runs with 1-inch riffles, lined with heavy Nomad matting. A Worthington 12 by 10-inch pump, powered by a Jimmy diesel engine, with 1800 igpm capability processed approximately 70 to 90 cubic yards per hour. Long toms and wheels were used for final cleanups. In 2002, a Caterpillar 12 by 10-inch pump powered by a 4 cylinder engine replaced the Worthington.

GROUND DESCRIPTION In 1998, the ground mined was composed of approximately 20 feet of frozen black muck, 7 to 8 feet of average-sized gravels and 2 to 3 feet of unconsolidated flat bedrock. Subsequent mining revealed an increased overburden layer of 35 to 40 feet in depth, with 16 feet of frozen gravels and 1 foot of wavy bedrock. Pay was located below the water course. Evidence of old shafts and bones were found in the waste section. Soap Creek was consistent with Gold Bottom Creek as far as the stratigraphic section. Approximately 4 feet of gravel and 1 foot of bedrock were sluiced. In 2002, Mr. Aimola returned to an area below camp where the overburden was only 6 feet in depth and there was a layer of gravel 15 feet thick, all of which was sluiced.

MINING CUTS One large cut 50 by 600 feet and one small cut 40 by 50 feet were mined in 1998 at Gold Bottom Gulch. In 1999, two cuts 100 by 500 and one cut 40 by 500 feet were mined and about 24000 cubic yards were sluiced. A cut 200 by 100 by 10 feet was monitored and sluiced in 2000 on the Melanie One claim. The operation was moved upstream to the confluence of Gold Bottom Creek and Soap Creek towards the end of season. Using a small test plant, a cut 100 by 30 by 10 feet of pay was mined. This area was completed in 2001 and an agreement struck with adjoining claim owner, Don Donis, to mine a portion of his ground and settle in an old cut. An area 70 by 120 by 40 feet was mined and sluiced. In 2002, a 60-foot wide by an average of 650 feet long cut was completed.

WATER SUPPLY AND TREATMENT Water for monitoring and sluicing was obtained from Gold Bottom Creek, Gold Bottom Gulch, Soap Creek and an unnamed left limit tributary, depending on location of the mine cut. This operator was licenced for in-stream settling ponds which were constructed as needed and decommissioned after mining was completed. In 2002, a more permanent settling facility was constructed downstream on Gold Bottom measuring about 200 by 500 feet.

GOLD The gold recovered varied in size and shape from flat to round, smooth to chunky. All of the gold was a bright, shiny colour and relatively rough in shape. Nuggets were recovered which tended to be round in shape and attached



Alfredo Aimola's sluice plant on Gold Bottom Creek.

to quartz, from ½ ounce to an ounce in size. Colouring was bright with a mesh size of 30% at +10, 50% at -10 and 20% at +60. Fineness averaged 780. In 2001, the gold found at Soap Creek was much coarser and one nugget weighed out at 40 grams. The operator noted that in 2002, when he was mining both sides of Gold Bottom that the right limit appeared to contain the coarser gold.

HUNKER CREEK	1150/15
Max Lanzinger	63°57'N 138°54'W
Water Licence: PM98-016	1998, 1999, 2000, 2001
Bonanza-Hunker Placer Area	Site no. 47

OPERATION/LOCATION Max Lanzinger mined along the right limit of Hunker Creek next to Whiskey Hill just downstream from Six Below Pup from 1998 to 2000. The operation was moved onto Whiskey Hill in 2001. Max Lanzinger operated by himself in 1998 and for most of 1999. Dave Brickner worked as a partner in 2000 and 2001.

EQUIPMENT/FUNCTION A John Deere 644 loader was used to dig pay gravel, feed the wash plant and remove tailings. In 1999, a Caterpillar 950 loader was added and in 2000 a Komatsu 400 excavator was used to dig gravel. In 2001, a Terex 8240 bulldozer was used for reclamation work and odd jobs.

WASH PLANT During 1998 and 1999, a 12-foot by 8-foot dump box fed a home-made shaker plant with a 6-foot by 8-foot screen deck which classified the pay gravels to -1¼ inch. The classified material was washed through a single sluice run 20 feet long by 4 feet wide. Expanded metal over astro turf lined the first 5 feet. The last 15 feet of sluice run used 1¼-inch angle iron riffles over astro turf. A 6-inch Gorman-

Rupp pump powered by a 3 cylinder Jimmy provided approximately 800 igpm which was used to process between 60 and 80 cubic yards per hour. Dave Brickner's wash plant was used in 2000 and 2001. Pay gravels were dumped into a dump box 4 feet wide by 16 feet long which fed onto a shaker deck 5 feet wide by 12 feet long that classified to -¾ inch. The classified pay gravels were first washed through a single sluice run 30 inches wide by 6 feet long lined with expanded metal over astro turf. The single run was followed by a double deck of oscillating sluice runs 8 feet by 8 feet with half the feed going to the bottom run. The double deck sluice runs were lined with expanded metal riffles over astro turf. An 18-inch wide by 30-foot long conveyor belt was used to remove and stack over-size tailings. A 6-inch by 5-inch high pressure water pump, powered by a Caterpillar 471 diesel engine, delivered about 900 igpm which was used to process from 100 to 150 cubic yards per hour.

GROUND DESCRIPTION Overburden varied from one location to another within the valley bottom and included old dredge tailings, washed tailings from hillside workings and bulldozer tailings from more recent operators. Depending on location the depths varied from 15 feet up to 25 feet. Below the old tailings were areas of virgin ground with 5 feet of frozen muck and 5 or 6 feet of pay gravel. Some of the tailings from the previous operations as well as all bottom gravels were sluiced. Whiskey Hill had previously been extensively hand mined and consisted of large quartz boulders on top of decomposed bedrock. All the gravels in the ditches between the valley bottom and Whiskey Hill were sluiced. Only the surface of the bedrock was sluiced on Whiskey Hill.

MINING CUTS In 1998, one cut approximately 100 feet long by 50 feet wide by 15 feet deep was mined. In 1999, a cut approximately 150 feet long by 80 feet wide by 25 feet deep was processed. In 2000, two cuts were mined, the first was about 100 feet long by 30 feet wide by 8 feet deep and the second was about 150 feet long by 75 feet wide by 38 feet deep. During 2001, the historic drains off Whiskey Hill were cleaned out and sluiced before relocating onto the Whiskey Hill rim. An area approximately 500 feet by 500 feet was sluiced but it was determined that the oldtimers had mined virtually all of the gold. Some testing was done before the operation was abandoned on Whiskey Hill.

WATER SUPPLY AND TREATMENT Water was pumped from Hunker Creek and settled in out-of-stream ponds. In 1999, 2000 and 2001, the water was recycled from the out-of-stream settling pond.

GOLD In 1998 and 1999, the gold recovered included approximately 40% rough nuggets to a maximum of ¾ ounce.



Max Lanzinger on Hunker Creek.

In 2000 and 2001, less than 5% nuggets were found. The purity varied from 837 to 840 fine.

COMMENTS A mammoth tusk was found in 1999. Most of the washed tailings from 1998 through 2000 were used to build a new section of the Hunker Creek road in the valley bottom.

HUNKER CREEK

1150/15

John Erickson 63°57'N 138°53'W
Water Licence: PM97-066 1998
Bonanza-Hunker Placer Area **Site no. 48**

OPERATION/LOCATION John and Sharon Erickson mined on Hunker Creek through 1998 in the Mint Gulch area. Most of the mining was done along the left limit on side pay. Grew Creek Ventures Ltd. took over the mining on this property in 1999 and John Erickson worked for them in 1999, 2000 and 2001.

EQUIPMENT/FUNCTION A Caterpillar D8 bulldozer was used for stripping and stockpiling pay gravels for sluicing. A Caterpillar 966 loader was used for feeding the sluice plant, handling tailings and other miscellaneous jobs. Most of the side pay was stripped using monitors to thaw the black muck.

WASH PLANT A 12-foot by 9-foot dump box fed into a conventional single sluice run approximately 32 feet long. Angle iron riffles and Nomad matting was used in the sluice run. A 10-inch by 12-inch Dayton pump powered by a Caterpillar engine supplied the 2000 igpm needed to process approximately 50 cubic yards per hour.

GROUND DESCRIPTION Most of the ground mined was along the left limit of Hunker Creek. An average of 25 feet of



John Erickson on Hunker Creek. Monitor being used to thaw black muck to expose side pay.

frozen black muck overlies a layer of gravel 6 feet thick. Bedrock typically is solid and rises away from the creek. The overburden was washed away with monitors and all the remaining gravels and a small amount of the bedrock were sluiced.

MINING CUTS A single cut measuring 250 feet long by 100 feet wide by 25 feet deep was mined in 1998. Mining activity during 1999, 2000 and 2001 is documented in the Grew Creek Ventures Ltd. summary.

WATER SUPPLY AND TREATMENT Water was pumped directly from a reservoir in Hunker Creek to the sluice box or to the monitors. The water was then treated in out-of-stream settling ponds before being discharged back to Hunker Creek. Recycling of water was often necessary.

GOLD The gold recovered was reported to be primarily fine with a lot of black sand. The purity was 830 fine.

HUNKER CREEK AND MINT GULCH 1150/15

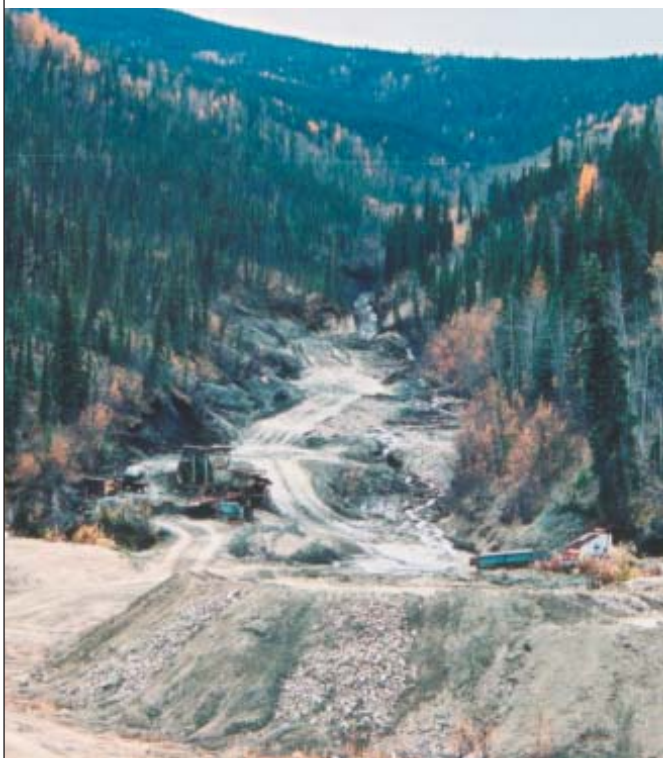
Grew Creek Ventures Ltd. 63°57'N 138°54'W
Water Licence: PM97-066/PM00-198 1999, 2000, 2001, 2002
Bonanza-Hunker Placer Area **Site no. 49**

OPERATION/LOCATION Dave Marsters moved onto this property and began mining in 1999. The mining started on Hunker Creek at the mouth of Rogers Gulch and then worked upstream on Hunker Creek. The mining was done on Hunker Creek in 1999 and 2000 and then was moved to the mouth of Mint Gulch for 2001. A crew of four miners ran a single 12-hour shift.

EQUIPMENT/FUNCTION A Caterpillar D8L bulldozer and a Caterpillar 235 excavator were used for stripping and ditching. A Caterpillar 966E loader was used to feed the sluice plant and for handling tailings. A Caterpillar D9G bulldozer was used in 2000 for stripping and reclamation work.

WASH PLANT A hopper feeding into a 5-foot wide by 8-foot long shuffle plate shaker deck classified the pay gravels to 1½-inch minus before passing over a boil box and then being sluiced through a single sluice run. The 5-foot wide by 10-foot long sluice run was lined with alternating sections of hydraulic riffles and expanded metal. A 6-inch Gorman Rupp pump, powered by an electric engine, supplied the 1800 igpm needed to process approximately 100 cubic yards per hour.

GROUND DESCRIPTION The Hunker claims varied in depth depending on whether side pay was being mined. An average of 10 to 15 feet of frozen black muck covers 10 feet of sand and from 4 to 6 feet of gravel. The bedrock was typically decomposed. The ground on Mint Gulch varied in depth



Grew Creek Ventures on Mint Gulch, Hunker Creek.

with 6 to 40 feet of frozen black muck overlying 3 feet of gravel. The bedrock was usually solid and slabby. All of the gravels, and from 2 to 4 feet of the bedrock, were sluiced.

MINING CUTS Five cuts (150 by 500 feet by 50 by 450 feet by 200 by 400 feet by 50 by 50 feet by 30 by 200 feet) on Hunker Creek were mined in 1999. Three cuts (300 by 40 feet by 350 by 60 feet by 275 by 25 feet) were sluiced in 2000 on Hunker Creek. A narrow cut approximately 2500 feet long was sluiced on Mint Gulch in 2001.

WATER SUPPLY AND TREATMENT Water was recycled in an out-of-stream settling pond/recycle pond system in 1999. Due to the higher rainfall in 2000, a recycle set-up was not required. Water was pumped from an in-stream reservoir to the sluice plant and then was settled in an out-of-stream location. Due to the narrow valley and steep gradient on Mint Gulch, the pay was hauled to the mouth of Mint Gulch and sluiced, using Hunker Creek water and out-of-stream settling in old mine pits along Hunker Creek.

GOLD The gold from Hunker Creek was reported to be both smooth and rough with a purity of 834 fine. Most of the gold from Mint Gulch was rough with a purity of 835 fine. Numerous nuggets up to 4 ounces were found.

COMMENTS Dave Marsters received the Robert E. Leckie Award for Outstanding Placer Mining Reclamation Practices in 2000 for his reclamation of 1.2 kilometres of Hunker Creek.

24 PUP/RIGHT FORK HUNKER CREEK 1150/15

Gerald and Elizabeth Ahnert 63°53'N 138°56'W
 Water Licence: PM00-178 1998, 1999, 2000, 2001, 2002
 Bonanza-Hunker Placer Area **Site no. 50**

OPERATION/LOCATION Gerald and Elizabeth Ahnert continued mining by themselves in a downstream direction on 24 Pup, a steep left limit tributary of Right Fork Hunker Creek, from 1998 to 2001. The mining was moved upstream for the 2002 season to where the Ahnert's started hand mining on 24 Pup, 20 years ago. This is a small-scale operation that has followed a narrow meandering pay channel.

EQUIPMENT/FUNCTION A 1969 John Deere 400 rubber tired loader/backhoe was used for stripping, stockpiling pay, feeding the sluice plant and levelling tailings.

WASH PLANT A 3-foot by 8-foot wet screen shaker was used to classify the pay gravels to 2-inch minus. The classified material was washed in a single sluice run. The sluice run was lined with 1-inch high by ½-inch wide Hungarian riffles over expanded metal and Nomad matting from 1998 to 2000. A section of hydraulic riffles was added in 2001.



Gerald and Elizabeth Ahnert's operation on 24 Pup, Hunker Creek.

Two 3-inch Honda pumps supplied the 200 igpm needed to process approximately 20 cubic yards per hour in 1998, 1999 and 2000. A 3-inch by 4-inch Keene pump replaced one of the Honda pumps in 2001. The processing rate dropped to approximately 8 cubic yards per hour in 2001.

GROUND DESCRIPTION The stratigraphic section was composed of approximately 17 feet of muck that contains large blocky bedrock overlying 5 feet of gold-bearing gravels. Bedrock has been found to vary from solid and blocky to fully decomposed. As in the past several years, all of the gravels and 1-foot of the bedrock were sluiced.

MINING CUTS This operation has mined at a small scale with a single piece of equipment and considerable hand work. Difficult sections of overburden that contain large blocky bedrock have been encountered as the mining progressed downstream. Some pay gravels were reached in 1998 and stockpiled for sluicing in 1999. During 1999, a 14-foot shaft was dug to try and locate the pay streak and a 160-foot long cut was stripped to within 5 feet of paydirt for sluicing in 2000. The weather in 2000 was very dry and only a small amount of sluicing was done in the spring due to the lack of water. The summer of 2001 was much wetter than normal and water was available throughout the season. A single cut 75 feet long by 15 feet wide was processed in 2001. A cut 50 feet long by 10 feet wide was processed in 2002.

WATER SUPPLY AND TREATMENT 24 Pup is a steep valley with a small watershed. Water has been a limiting factor for sluicing. In 2000, very little rain fell and sluicing was limited to a period in the spring. In past seasons, small springs have provided water throughout the summer but they disappeared in 1999 and 2000. A spring reappeared in 2001, and along with the heavier than normal rainfall, water was available for sluicing. Some hydraulic stripping was done by monitor when water was available. An out-of-stream full recycle system was used.



Gerald and Elizabeth Ahnert standing on the porch of their cabin on 24 Pup.

GOLD This tributary of Hunker Creek continues to produce interesting and varied types of gold. Both crystalline and dendritic gold is recovered. The gold is typically coarse and nuggets up to 2½ ounces have been recovered. The purity was reported to be 845 fine. Gerald Ahnert has successfully used a metal detector to check the bedrock and washed tailings for nuggets. Large pieces of soapstone suitable for carving are found in the gravels near the top of the mined portion of 24 Pup.

HUNKER CREEK

1150/15

Eureka Gold Panning Adventures

63°54'N 138°55'W

Water Licence: PM99-052

1998, 1999, 2000, 2001

Bonanza-Hunker Placer Area

Site no. 51

OPERATION/LOCATION Morris and Sandy George ran a two-person hand mining operation and tourist gold panning venture on Right Fork Hunker Creek from 1998 to 2001.

EQUIPMENT/FUNCTION A Bantam excavator was leased for short periods of time to strip overburden and expose pay gravels. Hand-held tools were used to excavate the pay gravel and to feed the wash plant.

WASH PLANT Two high bankers were used on the property. Each consisted of a 12-inch by 16-inch grizzly and a 26-inch by 26-inch hopper with water manifold, followed by a single sluice run 12 inches wide by 8 feet long. One sluice run started with 1 foot of 1-inch flat bar riffles, followed by expanded metal riffles over Nomad mat, and the other sluice run had expanded metal riffles over Nomad mat for the full length. Two Briggs and Stratton 2-inch water pumps, powered by 3 horsepower gasoline engines, supplied water to process from ½ cubic yard up to 1½ cubic yards per hour “on a good day.” Rocker boxes and gold pans were available for the tourists who visited the property.

GROUND DESCRIPTION Up to 21 feet of frozen black muck overburden was stripped from on top of the first layer of fine gravel and sand, which was only 18 to 24 inches deep and contained no gold. Next came a layer of heavy clay mixed with black dirt containing magnetite but little gold. The bottom layer of pay gravel was coarse gravel mixed with rocks and boulders about 1½ to 2 feet deep on top of decomposed bedrock. All of the lower gravels and the surface of the bedrock was sluiced.

MINING CUTS In 1998, 1999 and 2000, only hand mining occurred. In 2001, approximately 2280 cubic yards of frozen overburden was mechanically stripped from on top of virgin pay gravels which were then mined using hand-held tools.

WATER SUPPLY AND TREATMENT Water was pumped directly from Right Fork Hunker Creek. Small out-of-stream settling

ponds below each wash plant treated the effluent before being discharged back into the creek.

GOLD The gold tended to be chunky and between 10 and 16 mesh size with a few small nuggets. The purity was reported to be 798 fine.

RIGHT FORK HUNKER CREEK 1150/15

Tom McMahon 63°51'N 138°54'W
 Water Licence: PM99-021 1999, 2000, 2001, 2002
 Bonanza-Hunker Placer Area **Site no. 52**

OPERATION/LOCATION Tom McMahon operated a small-scale operation along the right limit of the right fork of Hunker Creek near its headwaters in 1999, 2000 and 2002. Very little activity occurred in 2001. A single employee helped out when needed during sluicing.

EQUIPMENT/FUNCTION A Gradall excavator was used for stripping, feeding the wash plant, handling tailings, constructing drains, and the construction and maintenance of settling facilities.

WASH PLANT A New Zealand-style wash plant was used. A hopper fed pay into a 3½-foot diameter by 12-foot long trommel. Eight feet of ½-inch screen classified the pay gravels before being sluiced. The ½-inch minus pay passed over two boil boxes before being sluiced through a single sluice run 6 feet wide by 5 feet long. Hydraulic riffles were used. A 30-inch wide by 28-foot long conveyor stacker was added in 2002. 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.

GROUND DESCRIPTION The ground along the right limit at the top of the property varied in depth from 15 to 20 feet deep. Approximately 15 feet of mixed black muck and slide rock overlies a maximum of 4 feet of gravel. Bedrock varied from solid and fractured to fully decomposed. The ground was mixed up from previous activities back to oldtimers, likely at the turn of the 20th century, which meant that everything needed to be sluiced. The cut along the right limit further down on the property was approximately 5 feet deep. The lower 2 feet of gravel and up to 3 feet of bedrock was sluiced.

MINING CUTS A single cut 250 feet long by 30 feet wide was sluiced in 1998. Three cuts measuring 250 feet long by 36 feet wide, 250 feet long by 40 feet wide and 250 feet long by 12 feet wide were sluiced during the 2000 season. No mining occurred in 2001. A cut approximately 400 feet long by 12 feet wide and a cut 200 feet long by 20 feet wide was sluiced during 2002.

WATER SUPPLY AND TREATMENT 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.

GOLD The gold was reported to be a mixture of both fine and coarse gold. The gold was screened to 10% +4 mesh, 30% -4 to +20 mesh, 60% -20 mesh. Most of the gold was rough and many of the small nuggets contained quartz. The gold is slightly dull in colour and mercury was common. The purity of the gold was 800 fine.



Thomas McMahon, Right Fork, Hunker Creek.