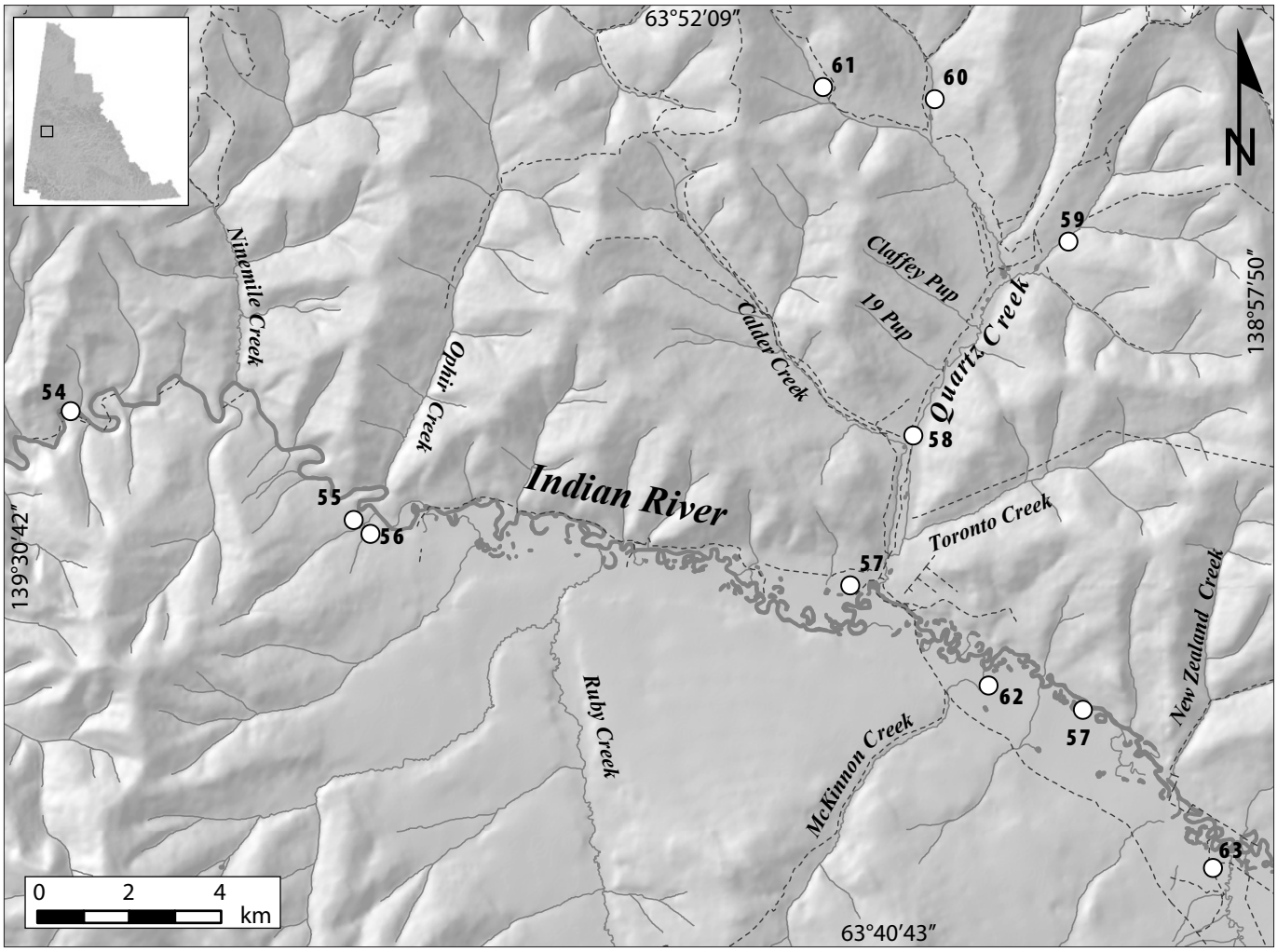
KLONDIKE:
INDIAN RIVER
PLACER AREA

SITES 54-63



LEGEND

54.....McBurney
55.....Arkinstall
56.....Boulder Mining Corporation Ltd.
57.....Ferguson
58.....Favron Enterprises Ltd.
59.....Tatlow Placer Mines Ltd.
60.....Nafziger
61.....Coomes
62.....Gimlex Enterprises Ltd.
63.....Klondike Star Mineral Corporation Ltd.

INDIAN RIVER, a tributary of Yukon River

1150/13, 1150/14

2006: 63°47'25"N, 139°29'00"W
2003: 63°46'57"N, 139°34'32"W

David McBurney
Water licenses: PM04-412 (2015), PM96-076 (2007)
Active producer (2003-2006) **Operation no. 54**

Location The property was located on the left and right limits of Indian River in various locations downstream of the mouth of Ninemile Creek. Camp is to be relocated to Nine Mile Creek on the right limit of Indian River for 2007.

Work History and Mining Cuts David McBurney began mining in this area in 1994. Mining cuts were excavated about 150 feet wide in consecutive strips, parallel to the river banks. In 2003, McBurney moved upstream on the right limit. In 2004, sluicing operations averaged 10 hours daily. In 2005, two new cuts were sluiced. In 2006, one long cut along the left limit and a smaller cut on an adjacent low terrace were sluiced.

Equipment and Water Treatment From 2003 to 2006, one Caterpillar D9G bulldozer was used for ripping and stripping frozen overburden, flattening tailings and spreading topsoil for restoration. Two Hitachi EX200 excavators were used for digging pay gravel, feeding the wash plant and removing tailings. A conveyor belt, 3 feet wide by 100 feet long, mounted on used excavator tracks, was used to strip overburden and waste gravel.

The wash plant consisted of a 5-foot-diameter trommel mounted on steel skids which classified material to ½ inch. A single sluice run, 2½ feet wide by 4 feet long with angle iron riffles, fed into 5 hydraulic riffle tables, 13 feet wide by 12 feet long. Tailings were stacked by a 40-foot-long conveyor belt. An Isuzu GBGIT-powered 6- by 6-inch Indeng pump delivered about 900 igpm which was used to process 85 cubic yards per hour. Water was pumped directly from the Indian River using fish screen mesh on the pump intake and was settled in out-of-stream ponds in old mining cuts. The settling pond seepage was captured by a ditch well away from Indian River.

Surficial Geology and Stratigraphy The section mined in 2006 consisted of 5 to 8 feet (1.5 to 2.5 m) of silt and organic material overlying 4 to 5 feet (1 to 1.5 m) of fine, stratified pebble gravel overlying 2 to 3 feet (0.6 to 0.9 m) of massive to stratified grey cobble pebble gravel. The lower gravel and up to 6 feet (2 m) of bedrock were sluiced. The low terrace on bedrock just above the main section consisted of poorly sorted angular gravel overlain by a thin organic layer. All material below the organic material was sluiced.

Feeding the wash plant at Dave McBurney's Indian River mine, 2006.

Bedrock Geology Bedrock varied from soft and decomposed to hard and blocky. In 2006, the bedrock was a carbonaceous quartzose schist with minor marble layers.

Gold Characteristics In 2006, the gold was fine-grained and flaky with fineness around 800.

INDIAN RIVER, a tributary of Yukon River

1150/14 2006: 63°46'03"N, 139°21'31"W

Cam Arkinstall, Nnahtur Resources Ltd.
Water license: PM99-046 (2009, Licensee: Nnahtur Resources Ltd.)
Active producer (2005-2006) **Operation no. 55**

Location The operation was located on a left-limit bench of Indian River, opposite the mouth of Ophir Creek.

Work History and Mining Cuts Limited exploration and test mining was done on this bench in past years, however, in 2005, the pit was expanded and a considerable amount of gravel was stripped and mined. Mining of the bench continued in 2006. Mr. Arkinstall worked a daily shift with the assistance of one helper.

Equipment and Water Treatment Equipment on the site included a Hough 90C loader for feeding the wash plant and removing tailings, and two bulldozers for stripping overburden. The wash plant consisted of a 40-foot-long, 6½-foot-diameter trommel with a hopper and final spray wash. Pay was classified to ½-inch and fed onto four oscillating sluice runs which were 16 feet wide and lined with hydraulic riffles. The process rate was 150 to 200 cubic yards per hour. Water was 100% recycled from the out-of-stream settling pond with no discharge.

Surficial Geology and Stratigraphy The stratigraphic section consisted of up to 9 feet (3 m) of organic material and silt overlying 6 to 8 feet (2 to 2.5 m) of stratified rusty pebble gravel on top of 6 feet (2 m) of massive cobble pebble white gravel on bedrock. The white cobble gravel was sluiced.

Bedrock Geology Bedrock at this site is blocky schist.

Cam Arkinstall (left) at his Indian River operation with placer researchers Dr. Vladimir Naumov (Perm University, Russia), William LeBarge (Yukon Geological Survey) and Vitalii Bryukhov (Perm University), 2006.

Gold Characteristics The gold was generally fine-grained and flat although occasional small nuggets were found. The fineness was 830.

INDIAN RIVER, a tributary of Yukon River

1150/14 2006: 63°45'53"N, 139°21'04"W

Boulder Mining Corporation
Water license: PM04-446 (2015)
Active producer (2004-2006) **Operation no. 56**

Location The two main pits were located on the left limit of Indian River just downstream of Ruby Creek.

Work History and Mining Cuts In 2004, Boulder Mining Corporation began exploration of bench gravel in the Indian River area along with Western Prospector Group. A total of 795 placer claims in three zones (Upstream, Downstream and Ruby benches), were staked on a 21-km (13-mile) stretch of Indian River, and cover an estimated 8300 ha (20,000 acres). Exploration consisted of an extensive program of auger drilling, rotosonic drilling, ground-penetrating radar, bulk sampling and geological mapping. Several hundred quartz claims were also staked. Auger drilling on the Downstream bench early in the program resulted in a weighted average gold grade in five holes of 2.3 g/t (0.067 oz/t) gold over 6 m (20 feet). On the upstream bench, the weighted average gold grade of 10 holes along a 3500 x 750 m (11,500- by 2500-foot) width was 0.58 g/t (0.017 oz/t) gold over 21.5 m (70½ feet). Rotosonic drilling results included intersections of 3.16 g/t (0.09 oz/t) over 0.9 m (3 feet), 1.08 g/t (0.03 oz/t) over 1.7 m (5.6 feet), and 0.32 g/t (0.009 oz/t) over 2 m (6.6 feet).

Cut-off grades for the deposit were estimated to be 0.1 g/t (0.003 oz/t). Bulk sampling in test pits by excavator increased the gold grades compared to drilling, as well as recovering coarser gold with several nuggets in the plus 1 g (plus 0.6 dwt) range. Some typical grades in test pits were 0.411 g/t (0.012 oz/t) over 0.8 m (3 feet), 0.586 g/t (0.017 oz/t) over 0.9 m (3 feet), and 0.220 g/t (0.006 oz/t) over 1.12 m (3.7 feet). Individual bulk sample weights were in the range of 12.3 to 34 t (11.2 to 30.9 tons). In 2005, two large pits with areas totalling 50 000 m^2 (540,000 square feet) were stripped and mined on Ruby bench. A total of 13 561 g (436 crude ounces) of gold was recovered. The property was inactive in 2006 except for reclamation, as Boulder concentrated their efforts on other properties. The main pits were recontoured and resloped.

Sluicing in Boulder Mining's main pit on Indian River, 2005

Boulder Mining's rotosonic drill on Indian River, 2004.

Equipment and Water Treatment Equipment and water treatment on site included a Hitachi 300LC excavator, Marooka tracked dump vehicle and Caterpillar D9 and D10 bulldozers. A Komatsu 750 excavator fed the wash plant, which included a hopper over a vibrating double deck which screened pay to minus ½ inch. The main sluice run was lined with angle iron riffles while three subsidiary sluice runs were lined with expanded metal and Nomad matting. The plant processed approximately 300 tonnes (150 m^3) of pay material per hour. Clean-ups were done with an 8- by 4-foot Deister table.

Surficial Geology and Stratigraphy Generalized stratigraphy consists of a Tertiary-age, 'White Channel' gold-bearing gravel on a bedrock terrace, which is in part overlain by glaciofluvial and glaciolacustrine sediments deposited during the earliest pre-Reid glaciation. The West End pit stratigraphy consisted of a massive, white cobble-pebble gravel layer 2 to 3 m (6 to 10 feet) thick overlain by 5 to 10 m (15 to 30 feet) of variable black muck or fine rusty sandy pebble gravel. The white gravel was sluiced along with 0.3 to 0.6 m (1 to 2 feet) of bedrock.

Bedrock Geology Bedrock is decomposed to fractured graphitic to chloritic schist on the main pit.

Gold Characteristics Gold recovered was generally fine grained and flat.

INDIAN RIVER, a tributary of Yukon River

1150/11, 1150/14

2006: 63°45'07"N, 139°08'18"W
2005: 63°45'15"N, 139°07'39"W
2004: 63°45'08"N, 139°07'53"W
2003: 63°43'34"N, 139°02'12"W

Kim Ferguson
Water license : PM02-304 (2008)
Active producer (2003-2006)

Operation no. 57

Location In 2003, the operation was located upstream of the mouth of Quartz Creek. In 2002 and 2004 to 2006, the operation was located at the mouth of Quartz Creek on a low-level right-limit bench of Indian River.

Work History and Mining Cuts In 2002, Kim Ferguson optioned the ground from Nnahtur Resources Ltd. Two miners and one camp person were involved in the short testing operation under a Schedule III water use permit. Two cuts were made at the site, one approximately 600 by 30 feet (200 x 10 m) and the second around 450 by 45 feet (140 x 15 m). In 2003, Mr. Ferguson moved to a location in the Indian River valley several kilometres upstream. He continued to mine in the early part of 2004, but later that season, moved the operation back to the mouth of Quartz Creek where he mined in 2005 and 2006.

Kim Ferguson relaying pay gravel to wash plant at the mouth of Quartz Creek, 2004.

Ferguson's wash plant operating on Indian River, 2003

Equipment and Water Treatment The operation from 2003 to 2006 used a New Zealand trommel which was floating at the upstream location but land-based at the downstream location. It was fed by a Hitachi EX300 excavator. Also on site were a Caterpillar 245 excavator and Caterpillar D9L bulldozer. The operation sluiced and recycled out-of-stream.

Surficial Geology and Stratigraphy In 2003 and 2004, the Indian River upstream section consisted of 6 feet (2 m) of stratified sand and organic material overlying 3 feet (1 m) of organic silt, overlying 9 feet (3 m) of well-sorted pebble cobble gravel on bedrock. The bottom 6 feet (2 m) of gravel was sluiced. The 2005 to 2006 downstream sections consisted of up to 6 feet (2 m) of silt overlying 6 feet (2 m) of rusty, angular stratified gravel mixed with organic pods, which was overlying 5 feet (1.5 m) of bleached quartz-rich white gravel on bedrock. The white gravel was sluiced along with approximately 1 foot (0.3 m) of undulating bedrock. The white gravel may be equivalent to the Ross gravel on Dominion Creek, as described by Froese *et al.* (2000).

Bedrock Geology Bedrock at this site is decomposed schist.

Gold Characteristics In 2002, the gold was described as fine and flaky with very few nuggets. Fineness was 785.

QUARTZ CREEK, a tributary of Indian River

1150/14 2003: 63°46'52"N, 139°06'30"W

Favron Enterprises Ltd., Paul Favron, John Loveless
Water license: PM00-204 (2006)
Active producer (2003) **Operation no. 58**

Location This operation was located on the right limit of Quartz Creek at the airstrip.

Work History and Mining Cuts In 2003, Favron stripped and sluiced a large cut on the right limit of Quartz Creek beside the airport.

Equipment and Water Treatment Equipment included three Terex scrapers, two Caterpillar bulldozers (D9L and D8K) and a Bucyrus Erie excavator. The wash plant included a dozer-trap screened hopper over a 42-inch by 16-foot conveyor, which fed pay to the 5- by 10-foot double (1½-inch and ¾-inch) oscillating screen deck. Plus ¾-inch material was removed by a 36-inch by 30-foot radial stacking conveyor while minus ¾-inch material fed to six 32-inch by 16-foot sluice runs lined with angle iron riffles, expanded metal and Nomad matting. An old mining cut beside the Quartz Creek road

Favron Enterprises mining near the airstrip on Quartz Creek, 2003.

served as a settling pond and as a reservoir for recycling water back to the plant.

Surficial Geology and Stratigraphy White Channel gravel forms a terrace along the right limit of Quartz Creek from the mouth of Little Blanche Creek to the confluence of Quartz Creek with Indian River. The area of the airstrip on Quartz Creek has abundant tailings from mechanical mining, but some parts of the bench have been stripped and not mined. A large thickness of gravel was stripped and the lower gravel was sluiced.

Bedrock Geology Bedrock is mapped as quartz-muscovite schist.

QUARTZ CREEK, a tributary of Indian River

1150/14 2004: 63°49'06"N, 139°02'12"W

Tatlow Placer Mines Ltd., Ken Tatlow, Kevin Tatlow
Water license: PM03-332 (2014)
Active producer (2003-2006) **Operation no. 59**

Location The operation has been located in various places between the confluence of Little Blanche and Quartz creeks and upstream on Mack Fork, a left-limit tributary to Quartz Creek.

Work History and Mining Cuts The Tatlows began mining in this area in 1991 and mined until 2000, when rising fuel prices and low gold prices made the operation uneconomic. The operation resumed in 2003 and was active in subsequent years including 2006. A crew of 2 miners and 3 camp personnel worked a daily 10-hour shift. Most of the work was in upper Quartz Creek where black muck was stripped with a hydraulic monitor and bulldozers were used to push up pay gravel. Two cuts were done in 2006, one 80 by 200 feet (20 x 60 m) and one 80 by 420 feet (20 x 130 m).

Equipment and Water Treatment In 2006, equipment included a Caterpillar D9L bulldozer for stripping and sluicing and a Hitachi EX300 excavator to feed the wash plant. The

A collection of Pleistocene fossils recovered by Tatlow Placer Mines on Quartz Creek, 2003.

wash plant was fed at 120 loose cubic yards per hour and included a 5- by 10-foot double screen deck over three 4- by 8-foot sluice runs and one 4- by 6-foot sluice run, each lined with expanded metal. Water was acquired from the return pond on Quartz Creek and supplied by a Caterpillar 3408-powered 12- by 10-inch pump. Effluent was settled out-of-stream and 80% recycled from two ponds, one 500- by 100-foot (150 x 30 m) pond on Quartz Creek and one 1000- by 1500-foot (300 x 450 m) pond on Indian River.

Surficial Geology and Stratigraphy In 2006, the section consisted of 30 feet (10 m) of mixed gravel, sand and muck.

Bedrock Geology Bedrock is partially decomposed, fractured and unconsolidated. In 2006, it was reported as schist which was 50% blocky.

Gold Characteristics In 2006, the gold was reported as rounded, with 50% less than 25 mesh in size and having a fineness of 760.

LITTLE BLANCHE CREEK, a tributary of Quartz

1150/14 2003: 63°50'50"N, 139°05'40"W

Irvin D. Nafziger
Water license: PM98-055 (2009)
Active producer (2003-2006) **Operation no. 60**

Location The operation has been located between 2 miles (3 km) upstream from the confluence of Little Blanche Creek with Quartz Creek and upstream on a left-limit tributary of Little Blanche Creek.

Work History and Mining Cuts Mr. Nafziger and one other miner began work on the property in 1990. The operation has been active every year since then including 2006.

Equipment and Water Treatment Equipment included a Caterpillar D8H bulldozer, a Caterpillar D8L bulldozer and an O&K 2-cubic-yard bucket excavator. The wash plant

Irv Nafziger's wash plant and hoe on Little Blanche Creek, 2005.

included a 10- by 10-foot hopper with a grizzly over a Super Sluice IV screen deck and two 3- by 6-foot sluice runs lined with angle iron riffles. This led to 4 feet of slick plate and 2 more sluice runs each 4 by 12 feet and lined with expanded metal over Nomad matting. An 8-inch pump, powered by a GM 371 diesel engine, delivered approximately 1500 igpm of water, which was used to process about 85 cubic yards per hour. Effluent was settled in-stream and partially recycled from settling ponds constructed from old mining cuts.

Surficial Geology and Stratigraphy The section consisted of an average of 10 feet (3 m) of black muck overlying 4 to 6 feet (1 to 2 m) of gravel. Approximately 4 feet (1 m) of gravel was sluiced. The waste sections were stockpiled where possible for use in road work, water structures and/or reclamation.

Bedrock Geology Bedrock was described as wavy, blocky brown to decomposed, grey/yellow-clay altered schist.

Gold Characteristics Gold was described as fine-grained and dull, with 3% nuggets. The fineness was approximately 640.

LITTLE BLANCHE CREEK, a tributary of Quartz Creek

1150/14 2003: 63°51'01"N, 139°08'39"W

Dave Trainer, Barbara Coomes
Water license: PM01-221 (2011)
Exploration (2003) **Operation no. 61**

Location This operation was located on the right fork of Little Blanche Creek.

Work History and Mining Cuts Barbara Coomes and Dave Trainer had an operation on Carmack Fork and travelled to this property for a short period of time in 2002. The following year, Trainer and Coomes moved some equipment onto the site and began stripping on the left limit.

Equipment and Water Treatment A Caterpillar D6 bulldozer was used to perform stripping and trenching to prepare ground for mining. No wash plant was used; bulk samples were taken back to the operation at Carmack Fork for testing.

Surficial Geology and Stratigraphy At the confluence of the right fork with the tributary, testing indicated there was 20 feet (6 m) of black muck overlying 10 feet (3 m) of gravel. The bench ground upstream is 20 feet (6 m) above the creek and consists of 3 feet (1 m) of black muck overlying 6 to 8 feet (2 to 2.5 m) of gravel.

Bedrock Geology Bedrock was described as yellow, unconsolidated schist.

INDIAN RIVER, a tributary of Yukon River

1150/11 2006: 63°43'53"N, 139°04'42"W

Gimlex Enterprises Ltd., Jim Christie, Tara Christie, Dagmar Christie, Sheamus Christie
Water license: PM95-077 (2014)
Active producer (2004-2006) **Operation no. 62**

Location The operation was located at the mouth of McKinnon Creek in the Indian River valley.

Work History and Mining Cuts In 2004, the Christie family began moving to this new location while mining on Dominion Creek. By 2005, the reclamation at Dominion Creek was complete and this was the new minesite for Gimlex Enterprises Ltd. Mining continued in 2006.

Equipment and Water Treatment Equipment from 2004 to 2006 included one Komatsu D475 bulldozer, two Komatsu D355 bulldozers and one Komatsu D155 bulldozer. There were also two Komatsu WA 600 loaders, one Komatsu PCL400 excavator and one Caterpillar 235 excavator. The loaders were used to feed the hopper for the plant and remove tailings while the other equipment was used for stripping overburden and mining. Pay was processed using an El Russ feeder with two conveyors and a 4- by 16-foot screen deck on a custom built wash plant. The processing rate was 250 to 350 loose cubic yards per hour.

Surficial Geology and Stratigraphy The stratigraphic section consisted of 6 to 10 feet (2 to 3 m) of mixed sand, silt and organic material, overlying 3 to 6 feet (0.9 to 2 m) of fine rusty pebble gravel overlying 4 to 6 feet (1 to 2 m) of grey cobbly gravel. A total of 4 feet (1 m) of gravel plus 2 feet (0.6 m) of bedrock were sluiced.

Bedrock Geology Bedrock is decomposed to blocky schist.

Gold Characteristics The gold was reported as fine-grained and flat, with a fineness of approximately 810.

Gimlex Enterprises Ltd.'s mining operation on Indian River in 2006; view to the east.

INDIAN RIVER, a tributary of Yukon River

1150/10 2006: 63°41'36"N, 138°58'57"W

Klondike Star Mineral Corporation Ltd.
Water license: S3DD0026 (2007)
Exploration (2005-2006) **Operation no. 63**

Location The testing took place along the Indian River valley between Eureka Creek and Montana Creek, mainly in the area of the mouth of Montana Creek.

Work History and Mining Cuts A total of 51 auger holes were completed during an extensive program of test drilling which took place in the Indian River valley in the vicinity of the mouth of Montana Creek in the early spring of 2005 and 2006. In the fall of 2006, the company ran a bulk placer test program.

Equipment and Water Treatment The company used a Nodwell-mounted auger drill in the drilling program. Drill samples were weighed, washed on-site through a long tom, screened and the gold was weighed. The bulk placer test was conducted in a closed pit with no discharge.

Surficial Geology and Stratigraphy Surficial deposits of widely varying age occur in the vicinity, including Tertiary White Channel gravel, pre-Reid glaciofluvial and glaciolacustrine sediment, Pleistocene interglacial deposits, loess and modern alluvium. The company has been targeting buried White Channel gravel deposits as well as Pleistocene and modern gravel.

Auger drilling results showed that the average depth to bedrock was 23 feet (7.0 m), with 12 feet (3.6 m) of organic material and silty overburden overlying 11 feet (3.3 m) of gravel. All holes drilled contained visually identified gold.

Bedrock Geology The area lies near the contact between Cretaceous Carmacks Group volcanic and sedimentary rocks and Permian Klondike Schist. The McKinnon Creek quartz-pebble conglomerate is part of the Carmacks group, and it may be a paleoplacer deposit which acted as an intermediate

host for placer gold derived from local bedrock sources. It also may be a possible source of gold enrichment in the area which may have contributed to the richness of the younger alluvial deposits.

Gold Characteristics Gold is generally fine grained with occasional flakes and small nuggets.

Klondike Star Mineral Corporation Ltd. auger drilling on Indian River, March 2006.