

Yukon Placer Database Operations Report



Field Name: Ross Mining Ltd., 1980-1984, 1990-2003

Last Update: 21-Mar-2005

Status: Active Producer

Stream: Dominion: a tributary of Indian

Map Sheet(s): 115O/10, 116B/10

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Operators

Name	From (Date)	To (Date)	Comment
Ross Mining Ltd.	1990/01/01	2003/12/31	
Ross Mining Services Ltd.	1982/01/01	1984/12/31	
Ross Mining Services Ltd.	1980/01/01	1981/12/31	

Owners

Name	From (Date)	To (Date)	Comment
Ross Mining Ltd.	1990/01/01	2003/12/31	
Norm Ross	1982/01/01	2003/12/31	
Ross Mining Services Ltd.	1982/01/01	1984/12/31	
Ross Mining Services Ltd.	1980/01/01	1981/12/31	
Consolidated Mines Yukon Ltd.	1974/01/01	1981/12/31	In 1980, Ross Mining Services Limi

General Location

Ross Mining is mining intermediate-level gravel in Dominion Creek, just upstream of Gimlex Gold Mines. In 1980, the property was situated along the right limit of Dominion Creek, in the broad, flat valley just downstream from the mouth of Gold Run Creek. In 1983, the property was located along the right limit of the creek, just downstream from the mouth of Gold Run Creek, near the edge of the wide Dominion Creek Valley. In 1999, the location of the operation was still on Dominion Creek, but at the confluence with Rob Roy Creek.

Location Details

Date:	Latitude			Longitude			Elevation (feet)	Distance from Mouth (feet)
	Deg	Min	Sec	Deg	Min	Sec		
2003/01/01	63	41	40	138	36	14		
2001/01/01	63	40	48	138	35	41		
1998/01/01	64	41	2	138	35	40		
1995/01/01	63	41	0	138	35	0		
1993/01/01	63	41	0	138	35	0		
1989/01/01	63	41	0	138	38	0		
1983/01/01	63	41	0	138	37	0		
1980/01/01	63	41	0	138	36	0		

Water Licence(s)

Number	Comments
PM97-047	Expires: 2013/05/13
PM94-050	
PM93-064	
PM90-068	
PM90-067	
PM87-024	

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In 1980, Ross Mining Services Limited managed work done by Gold Run Investments Corporation on the property held by Consolidated Mines Yukon Ltd. A drain 3,670 metres (12,000 feet) long, and up to 12.2 metres (40 feet) deep was dug. There were 229,350 cubic metres (300,000 cubic yards) of material stripped, and an additional 344,000 cubic metres (450,000 cubic yards) of material mined and sluiced.

Mining continued in 1981, but no production figures were given. Gold Run Investments Corporation went into receivership prior to the 1982 mining season.

There was no mining activity on the property in 1982.

The 1983 season saw the company mining on the property and stripping approximately 300,000 cubic yards of material.

During 1984, the company stripped and sluiced approximately 200,000 and 100,000 cubic yards of material from two cuts.

No data was given from 1985 to 1989.

In 1990, nine miners working ten hour shifts mined the property.

Two miners and 2 camp personnel worked 12 hours per day during the 1991 season. Three miners and 2 camp personnel worked 12 hours per day in 1992. Two cuts were processed in 1991 and 1992. They were 750 feet by 250 feet, and 750 feet by 350 feet. Stripping totalled approximately 300,000 cubic yards, and sluicing approximately 85,000 cubic yards.

Three cuts were mined out in 1993. The dimensions were 650 feet by 400 feet, 400 feet by 250 feet, and 450 feet by 300 feet. The operators were into pay on a fourth cut 400 feet by 250 feet.

In 1993, three cuts were mined with a total surface area of 550,000 square feet.

During the 1994 season, one large "L" shaped cut was mined. This cut has a surface area of 600,000 square feet.

From 1995 to 1997, the operation employed from 9 to 10 miners and from 5 to 6 camp workers. The regular shift for workers was 10 hours per day.

In 1995, approximately 500,000 square feet was mined.

About 550,000 square feet of material was mined in 1996.

The cuts made in 1997 ranged from 100,000 to 300,000 square feet. This open pit style operation had all ore hauled to a central processing plant.

Eight miners working out of four camps worked one 10.5 hour shift per day in the 1998 season. Two cuts were mined. One was about 180,000 square feet, and the other was about 260,000 square feet.

In 1999, an additional camp employee was added to the operation. One cut was of approximately 650,000 square feet was mined.

For the 2000 season, six to nine miners were employed out of 2 to 4 camps to work one of two 10 hour shifts per day. The total amount of ground mined was 850,000 square feet.

In 2001, fourteen miners worked out of two camps working one of two 10.5 hour shifts per day. One cut was mined measuring about 900,000 square feet.

The crew increased again in 2002. Sixteen miners and three camp personnel worked two 10.5 hour shifts per day. The cut mined during this season was 1,080,000 square feet.

During 2002, drilling began on the claims near Arkansas Creek just downstream from an area previously mined by M. & V. Johnson. A-1 Cats completed some testing. Mechanical stripping continued throughout the 2003 season.

Production

Year	Stripped	Sluiced
2001	Unknown	900000 square feet
2000	Unknown	850000 square feet
1999	Unknown	650000 square feet
1998	Unknown	440000 square feet
1997	200000 cubic yards	Unknown

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Year	Stripped	Sluiced
1996	550000 cubic yards	Unknown
1995	500000 cubic yards	Unknown
1993	Unknown	550000 square feet
1992	340330 cubic yards	91670 cubic yards
1991	300000 cubic yards	85000 cubic yards
1984	200000 cubic yards	100000 cubic yards
1980	300000 cubic yards	450000 cubic yards

Equipment

In 1980, one D8H, and two D9H Caterpillar bulldozers, one 922B loader, one 245 backhoe, two 637 scraper-loaders with 23.7 cubic meter (31 cubic yard) capacity, and one 14D grader were used on the property. The material sluiced was processed in a modified "Ross-500" sluice box with a capacity of up to 535 cubic meters (700 cubic yards) of material per hour. Scraper-loaders mined gravel from the large pit, and moved it to a stockpile near the sluice box. D9 bulldozers fed the sluice box when gravel from the top of the section was being processed, but was fed more slowly by backhoe when gravel from the bottom of the section was being processed.

A new sluice box, the "Ross-1000" was built for use at the property in 1981. It had a capacity of 765 cubic meters (1,000 cubic yards) of material per hour. Including the dump box, it is 18.3 meters (60 feet) long, and 9.1 meters (30 feet) wide, and weighed 90,750 kg (200,000 lb). When operating, it required 75,700 liters (16,650 gallons) of water per minute. This sluice box is reported to be the world's largest. Sluicing at this property was done on one shift at a rate of approximately 7,650 cubic meters (10,000 cubic yards) or 13,600 tonnes (15,000 tons) per day.

In 1983, a Caterpillar D8 bulldozer and a Caterpillar 988 loader were used to do stripping, mining, and to feed the sluice box. A rented Caterpillar 637 scraper-loader was also used a required to do stripping. In 1984, a model 500 Ross sluice box was used for sluicing. Water for sluicing was pumped at a rate of 6,000 igpm from a holding pond fed by a diversion ditch from Dominion Creek.

In 1990, a Caterpillar 245 excavator, a Komatsu PC400 excavator, three Caterpillar 769 rock trucks, a Caterpillar D10L, Caterpillar D9L Caterpillar D8L and a Caterpillar 988 loader were used. Two wash plants were used, a Ross 500 and a Ross 1000. They processed pay gravel at a combined rate of 150 to 300 cubic yards per hour. Water was supplied by a 20 by 24 inch pump powered by a Caterpillar 398 engine and a 10 by 12 inch pump powered by a GMC 671 engine at a combined rate of 6,000 igpm.

In 1993, one D10 and two D8L Caterpillar bulldozers, three 769B Caterpillar rock trucks, one 245 Caterpillar excavator, one PC400 Komatsu excavator, and one 988 Caterpillar loader were used to mine the site in 1993. A 992 Caterpillar loader and a D9L Caterpillar bulldozer were added in 1994. Three Terex 60 ton trucks replaced the Caterpillar rock trucks in 1994.

The wash plant consisted of a screen plant, which fed oscillating sluice runs. A belt feeder/conveyor was added for the 1994 mining season. A 12-inch by 14-inch pump provided 3500 igpm to process 200 loose yards of pay per hour. Process water was supplied from Dominion Creek by a large recirculation/settling pond system.

Approximately 400 igpm of make up water were added to the system from Dominion Creek.

In 1995, excavation, ore hauling and transportation of waste were accomplished using 3 bulldozers, 3 excavators, 3 rock trucks and two loaders. The bulldozers were Caterpillar models D10, D9L and D8L. The excavators were Hitachi EX1100, Cat 245 and Komatsu PC400. The rock trucks were all 60 ton Teres 3309. The loaders were Cats 992 and 998. A fourth rock truck was added in 1996. The PC400 excavator was not part of the operation in 1997.

A grader was also used at the site for the road building and maintenance undertaken by this operation. The wash plant was comprised of a hopper feeder to a conveyor which in turn fed the material into a triple deck screen plant and then into an oscillating sluice. A coarse tailings stacker was added in 1996. The screen deck was changed to a double deck in 1997. In 1995 and 1996, a 12 by 14 inch B and D pump powered by a Cummins engine provided

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the 3000 igpm needed by the wash plant to process from 200 to 400 loose yards per hour of material. In 1997 the pump used was a 12 by 14 inch Daton pump. This operation utilized a recirculation settling system with make up water coming from Dominion Creek. From 95% to 96% of the water is recycled through a 5-pond system. A new primary settling pond was established each year. The ponds range in size from 200 by 700 feet to 100 by 400 feet. In 1998, the same equipment was used as in the previous three years. The wash plant was a double deck 6 by 20 screen deck which def into 6 oscillating sluice runs. A hopper was used to feed the sluice plant, via conveyors. A Cummins 12 by 14-inch pump powered by a Cummins engine delivered 2000-6000 igpm. Material was processed at a rate of 225-350 loose yards per hour. Water was acquired from Dominion Creek for make-up water only. One large settling pond was used, and was approximately 500 by 800 feet. Effluent was treated in an out-of-stream settling pond with 97% recycle efficiency. Clean up was performed by a Trommel and Tables.

In 1999, the same equipment and wash plant were used as in 1998. The Cummins pump was replaced by a 12 by 14 inch D & B pump which was powered by a Cummins engine producing 2000-6000 igpm. Material was processed at a rate of 225 to 400 loose yards per hour. Water was acquired from Dominion Creek for make-up only. Two ponds were used to recycle 98%. They measure 300 by 400 feet and 500 by 600 feet. Clean up was performed with a Trommel and Tables.

In 2000, stripping and mining was performed by 4 dozers (D10L, two D9L's, and a D8L), 3 backhoes (EX1100 with 8.5 cubic yard bucket, Cat 245 with 5 3/4 cubic yard bucket, and a PC400 with a 3 3/4 cubic yard bucket), and three rock trucks, which were 60 tonne Terex 3309's. A grader was also used at this site. The wash plant was a double deck vibrating screen onto six oscillating sluice runs. A 12 by 14 inch B & D pump was used which was powered by a Cummins engine, which produced 2000 to 4000 igpm. The processing rate was 200 to 400 loose yards per hour. Water was totally recirculated. The pond was 765,000 square feet and recycled 100%. Clean ups were performed with tables.

In 2001, 14 pieces of major construction type equipment were used. This included 3 sixty ton trucks, 4 bulldozers (D10L, D9L, D10N, D8L), 3 loaders (992, 988, 980), 3 backhoes (EX-1100, Cat 245, PC400), and 1 16G Grader. The wash plant and pump remained the same as in the previous year. Water was initially acquired from Rob Roy Creek, and the total recirculation system required minimal make up. The pond size was about 700,000 square feet by 20 feet deep. Clean ups were performed using a small trommel and tables.

For the 2002 season, two 40 ton trucks were added. The same wash plant and water processing methods were used as the previous year.

Environmental Work

Year	Reclamation Work
2003	Reclamation addressed as mining progressed.
2001	Cuts are backfilled first with settling then covered with gravel and topped with 2 to 10 feet of waste muck for regrowth.
1995	Rehabilitation work is planned to coincide with the stripping program to backfill and reclaim mined out areas. This operation sets a good example of how with planning, reclamation can be accomplished in an economically feasible manner as a part of the overall mining plan.
1993	The Dominion Creek valley in this area is wide and flat. Reclamation has been addressed on an ongoing basis, with tailings being contoured and covered with top soil.
1992	A system consisting of 4 ponds measuring roughly 150 feet by 400 feet by 20 feet deep helped recycle 98% of the process water.
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Landforms

Landform	Comments
Alluvial Valley	

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The gravel consists of 4 meters of grey gravel (interpreted as reworked White Channel Gravel) overlain by 3 meters of brown granule gravel with interbedded sand lenses (dominion Creek Gravel). In 1978, deposits mined were 10.6 to 13.7 meters (35 to 45 feet) thick, and consisted of 3 to 4.6 meters (10 to 15 feet) of black muck overlying 7.6 to 9.1 meters of gravel. The gravel had an upper, brown sandy polymictic portion, overlying a white, quartz-rich portion analogous to the White Channel gravel of Hunker and Bonanza Creeks. Parts of the quartz-rich gravel were badly stained by iron from groundwater. Underground mining in large, timbered rooms was done previously on the property.

In 1989, deposits consisted of 35 feet of black muck covering 30 feet of gravel. The lower 5 to 15 feet of gravel plus 2 to 3 feet of bedrock were sluiced.

In 1991, overburden varied in depth from 18 to 75 feet, all of which was in permafrost. The average depth of mined areas was 58 feet. From 10 to 25 feet was muck, 10 to 65 feet was gravel, and 5 to 15 feet contained considerable old works. The sluice section consisted of 5 to 15 feet of gravel and 2 to 5 feet of bedrock.

In 1995 this operation encountered 10 to 20 feet of muck over 20 to 50 feet of gravel.

In 1996 the stratigraphic section was 10 to 25 feet of muck over 15 to 45 feet of gravel. All of the material was frozen. Approximately 50% of the material was sand or smaller grained with very few large boulders (>2feet). In 1997 three pits were mined. The total depth varied from 30 to 75 feet. Cut one was 10 feet of muck and sand, over 6 to 10 feet of Dominion gravel on 12 to 15 feet of White Channel gravel. Cut two was 6 to 8 feet of muck over 8 to 10 feet of Dominion gravel over 15 to 20 feet of White Channel gravel. Cut three was 25 feet of muck and sand on 10 feet of red Dominion gravel over 25 to 30 feet of slide rock on 10 feet of White channel gravel. The 4th sluice section in the first year was 6 to 10 feet of gravel and 2 to 5 feet of bedrock. In the second year it was 6 to 15 feet of gravel and old dredge tailings along with 2 to 5 feet of bedrock. The third year's sluice section was 6 to 12 feet of White Channel gravel.

In 1998 and 1999 it was found that there was between 6 and 10 feet of black muck, 8-12 feet of Dominion Gravel and sand, and 10 - 15 feet of White Channel gravel. Four to eight feet of the White Channel gravel, and 2 to 6 feet of bedrock was sluiced. The waste section consisted of 24 to 28 feet of gravel and muck. The cuts performed were backfilled with settling first, stripping and then sloped and overlain with topsoil.

In 2000, muck was 5 to 15 feet thick, sand was 2 to 15 feet thick, Dominion red gravel was 5 to 10 feet thick, and White Channel gravel was 5 to 10 feet thick. Four to 10 feet of the White Channel gravel and 2 to 6 feet of bedrock were sluiced. Waste was stockpiled or backfilled mechanically.

In 2001, the stratigraphic section consisted of 6 to 14 feet of muck, 2 to 8 feet of sand, 6 to 12 feet of red gravel, and 8 to 12 feet of White Channel gravel equaling an average 24-foot depth to bedrock. Four to 8 feet of the White Channel gravel and 3 to 6 feet of the bedrock was sluiced.

Bedrock Geology

In 2001, bedrock was found to be green chlorite schist.

Gold Comments

The placer gold is mostly smooth and flattened, with some angular, rough and spongy gold, and has a fineness ranging from 845-865.

In 1983, gold recovered was reported to have a fineness of 816 to 840. In addition to gold, magnetite, garnet, and epidote were recovered from the deposits at this location.

In 1989, gold recovered was reported to have a fineness of 850. In 1993, the gold was very fine, although some spongy nuggets were recovered. Fineness was 850 to 855.

In 1995, the gold recovered was described as angular, rough and spongy in form with 50% -50 mesh. Fineness in 1995 and 1996 was 882 to 886. In 1997 the fineness ranged from 845 to 865.

In 1998, the gold recovered was 50% -50 mesh. Fineness ranged from 830 to 860.

In 1999, gold recovered was reported to be both fine and rugged with a fineness of 840 to 860.

In 2000, the gold reported was the same as in 1998, but the fineness was 845 to 875.

In 2001, fine gold was recovered as well as nuggets rugged with quartz and vugs. Fineness was 882 to 885.

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In 2002, the purity of the gold was 835 to 860 fine. It was described as fine and rugged with 50% smaller than 50 mesh.

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Pictures

Title:

Notes:

Title: Ross Mining Ltd. On Dominion Creek

Notes:

Current mining areas in the foreground and reclaimed ground in the background.

This operation received the Robert E. Leckie Award for Long Time Achievement in Mine Reclamation in 2001; presented to Norman Ross of Ross Mining Ltd.

