# FORT KNOX MINE KINROSS GOLD COMPANY

# KINROSS



2008 ANNUAL ACTIVITY REPORT FEBRUARY 2009

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# 1.0 <u>INTRODUCTION</u>

Fairbanks Gold Mining, Inc. (FGMI), a wholly owned subsidiary of Kinross Gold USA, Inc., has prepared this annual report, to comply with the conditions described in Section 11.b. of the Amended and Restated Millsite Lease ADL Nos. 414960 and 414961 and the ADEC Solid Waste Permit 0031-BA008 for the Fort Knox Mine.

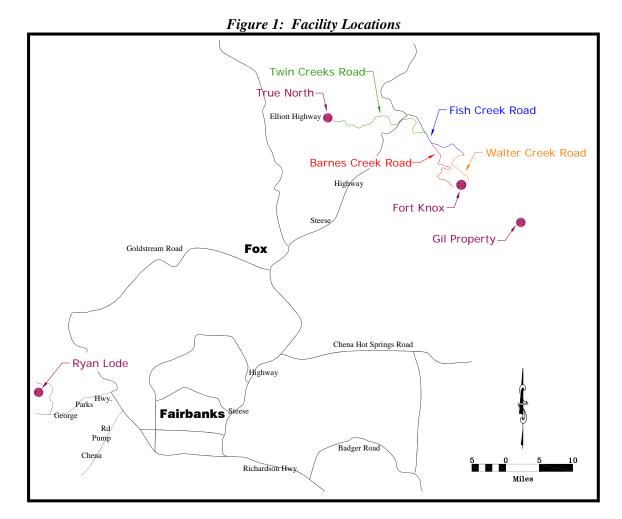
The Fort Knox mine includes the main Fort Knox open pit mine, mill and tailings storage facility, and Walter Creek Heap Leach facility. The True North open pit mine is currently under care and maintenance. These facilities are located within the Fairbanks North Star Borough, approximately 25 miles northeast of Fairbanks, Alaska (Figure 1).

The milling and mining operations at Fort Knox continue to operate 24-hours a day, 365 days a year. As of the end of 2008 FGMI employed 455 personnel. Fort Knox produced 328,857 gold equivalent ounces in 2008. .

This report describes the mining and milling activities during calendar year 2008 and planned activities for 2009. It is divided into the following 4 sections:

- Section 1 Introduction
- Section 2 Summary of activities conducted during 2008
- Section 3 Activities planned for 2009 Projected
- Section 4 Description of mine water usage





# 2.0 SUMMARY OF 2008 ACTIVITIES

The 2008 activities that have been involved with the ACOE, ADEC, ADNR, BLM, EPA, Husky Oil Company, and NOAA are summarized below:

- Discussions have been initiated with NOAA and BLM to obtain approval to encroach upon the NOAA withdrawal with a waste rock dump. It is thought that this will be a permissible use since there will be no mining on the withdrawal.
- Gold Run Ltd. has accepted responsibility for the Ryan Lode Waste Management Permit and has put in place the required financial assurance. ADEC has transferred the permit to Gold Run; FGMI no longer has responsibility for the property.
- Husky Oil Company requested FGMI to accept additional material from the cleanup of their site in Fox for processing through the Fort Knox mill. When operating, the Fox site was a contract beneficiation facility for processing local ore. ADEC was in support of this approach to cleaning up the Fox site and in June 2008 FGMI received a letter of appreciation from ADEC Commissioner Hartig for participation in addressing this environmental challenge. The additional 2,200 tons was delivered to Fort Knox in July and August.

• On August 18, 2008, approval was granted by ADNR, ADEC and ACOE to expand the heap leach growth media stockpile from 25 acres to 45 acres.

#### 2.1 PERMITTING ACTIVITIES AND LAND STATUS

The following is a list of the approved plans and permits issued to FGMI in 2008:

- United States Corps of Engineers (USACE) approved Fort Knox Reclamation and Closure Plan Permit No. POA-1992-574-T, Fish Creek.
- Fort Knox received notice that they have been determined by the International Cyanide Management Code (ICMC) to be in full compliance with the Cyanide Code. Fort Knox QA/QC Field Procedures completed in March 2008.
- True North Reclamation Plan (submitted).
- Fort Knox Mine Compliance Monitoring Plan submitted.
- Spill Prevention Control and Countermeasures Plan (SPCC) for Fort Knox.
- A Notice of Intent (NOI) was submitted for Fort Knox and a second one was submitted for True North in accordance with the requirements of the Multi-Sector General Permit for Storm Water Discharges Associated with Industrial Activity. A Storm Water Pollution Prevention Plan has been completed for each of the properties.
- During the 4<sup>th</sup> Quarter, FGMI submitted to EPA the Notice of Termination (NOT) for the Ryan Lode Multi-Sector General Permit Storm Water Pollution Prevention Plan (SWPPP).
- A report on implementation of aufeis abatement on Lower Last Chance Creek was submitted to the U.S. Army Corps of Engineers and the Alaska Department of Fish & Game. The success of the program will be evaluated as the winter season progresses.
- Fort Knox Final Air Quality Control Minor Permit AQ0053MSS02 was issued with a new Owner Requested Limit that incorporates the five new waste oil heaters in the maintenance shop.
- Fort Knox Mine Heap Leach Mobile Crusher, Final General Operating Permit No. 9, Permit No. AQ0053GP901 was issued.
- The APMA 9156 Fort Knox Exploration permit was revised.
- The APMA 9736 NOAA parcel Exploration Drilling was revised.
- 11-26-08 404 Permit Modification POA-1992-574-M17 (disturbance for 3 Piezo pads below TSF).
- 2-1-2008 ACOE issued a 404 permit for Parcel A.

The following is a list of permits pending as of December 31, 2008:

• In November, the potable water well was turned off after interim approval to operate was issued in July. FGMI is working with a local engineer to resolve ADEC's issues with construction of the well.

• FGMI is working with the LMPT to update the financial assurance required by the Agreement for Funding Post-Reclamation Obligations. Once the costs have been agreed upon, the Letter of Credit will require revision to reflect the new cost.

# Land Status

Discussions have been initiated with NOAA and BLM to obtain approval to encroach upon the NOAA withdrawal with a waste rock dump. An agreement was reached with NOAA and BLM to release 63 acres from the NOAA withdrawal that were required by FGMI for expansion of the Fort Knox pit. The land was conveyed to the State of Alaska who in turn conveyed it to the Mental Health Trust Land Office (TLO). As part of this agreement, a 19 acre easement was established at the ridgeline to prevent any activity that could impact the activities of NOAA.

In 2008, FGMI reached an agreement with TLO to purchase their surface interest within the Millsite Lease area (approximately 1,709 acres). The purchase was finalized in May 2008.

A revised and updated Plan of Operations for True North was submitted in May 2008. The Plan of Operations includes the Project Description, the Reclamation and Closure Plan and the Monitoring Plan. Based on the revised reclamation and closure plan, the True North reclamation and closure costs for financial assurance have been updated in 2008 and the revised cost was determined to be \$4,037,394. In May of 2008 a request was submitted for partial release of financial assurance at True North in the amount of \$1,281,822. Following approval of the proposed of financial assurance for True North, the Letter of Credit will be increased to \$2,755,572.

The Waste Management Permit for Ryan Lode has been transferred to Gold Run Ltd., the owner of the property, and the financial assurance provided by FGMI for Ryan Lode has been released.

#### 2.2 PUBLIC SAFETY

#### Public Safety and Access

FGMI performs necessary maintenance on the mine access road from the Steese Highway to Fort Knox and True North. The Mine supplies equipment to grade the road, keep drainage open and perform snow removal in the winter. FGMI Security has maintained their presence on the road in 2008. Security officers regularly patrol the road to assist anyone with vehicle trouble and to ensure that speed limits are being obeyed while driving with prudence. The Security department ensures that trespassers remain offsite to eliminate any non authorized visitors from the mine site.

The portion of Fish Creek Road that joins with the Walter Creek Road has a limited use gate for contractor and claim holder access to lower Fish Creek. A security gate was installed at the entrance to the True North Mine in 2004 to prevent unauthorized access to the True North Mine area while mining is suspended.

FGMI completed 2008 with the lowest rate of injury in its history. Injuries suffered by employees are defined by the incident rate. The incident rate in December 2008 was 1.33 per 200,000 manhours worked. compared to 1.42 per 200,000 man-hours worked in 2007. Fort Knox employees work approximately 850,000 man-hours per year.

New safety initiatives, such as employeedriven safety teams like the See it Own it



Solve it (S.O.S) program, the STOP program, and new awards programs for safe behavior have decreased the number of injury incidents and the mine recorded no Lost Time Incidents in 2008. Fort Knox has now completed two years without a Lost Time Incident. This is a total of 1,748,363 safe work hours. Fort Knox truly believes that safety is more important than gold.

#### **Dust Suppression**

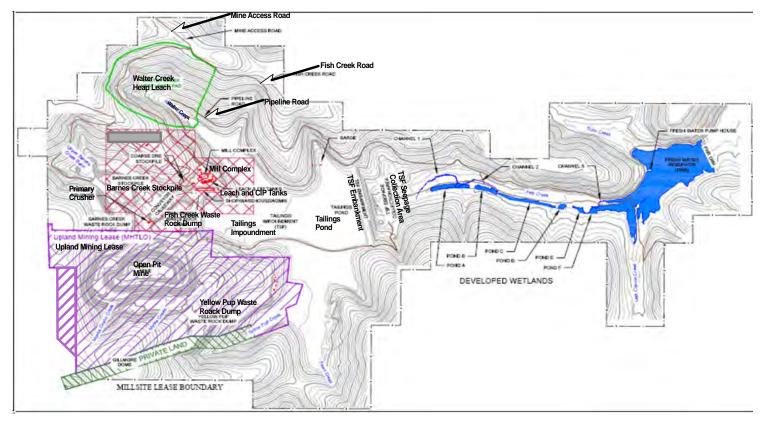
FGMI uses the Twin Creek haul road to access the Fort Knox and True North Mines from the Steese Highway (Figure 2). FGMI developed a *Fugitive Emissions of Particulate Matter Control Plan* in June 2002 that was subsequently approved by ADEC. The plan described the measures FGMI is to implement for the control of fugitive emissions of particulate matter.

During the warmer months, calcium chloride is applied to the road surface as a dust suppressant on the Fish Creek, Barnes Creek, Walter Creek and Twin Creek roads. Additionally, water is applied to the roads as needed to control fugitive dust. These measures were effectively implemented beginning in 2005. There were no complaints of road dust received in 2008.

# Recreational Trails

The Gilmore and Alpha C trails remained open to recreational users. However, portions of the Gilmore Trail in the vicinity of the Fort Knox west pit area were closed beginning in 2008 to ensure public safety. The closure was due to an expansion of the pit to the west.

Figure 2: Local Roads and Mine Facilities



# **Noise Monitoring**

With no ore haul trucks from the True North mine traveling Fish Creek Road or Twin Creeks Road, no noise monitoring was performed in 2008.

#### Ballot Measure #4

Ballot Measure #4 was an initiative presented to Alaskan voters in 2008 that constituted a threat to the entire mining industry. The alleged motivation behind the measure was to stop the Pebble Project from establishing mining activities. However, the reality of the initiative was not so selective and threatened all large-scale metal mines in Alaska, including Fort Knox. As a member of the Council of Alaska Producers, FGMI supported the Alaskans Against the Mining Shutdown campaign and contributed to efforts to defeat Ballot Measure 4. The campaign was ultimately successful and more than 108,000 Alaskan voters rejected the measure on August 26, 2008.

# 2.3 MINE OPERATIONS

### Pit Production

In 2008, FGMI mined 54.529 million tons of material from the Fort Knox pit with an average production rate of 149,395 tons per day (Table 1). The increase in ore production resulted from stockpiling lower grade ore for future heap leaching.

Fort Knox Annual Mining Rates

Table 1

Year	Ore (Million Tons)	Transition Grade Ore (Million Tons)	Leach Grade Ore (Million Tons)	Waste (Million Tons)	Total (Million Tons)
1996	.96	.36	0	15.36	16.68
1997	12.57	4.88	0	14.93	32.38
1998	13.83	5.27	0	14.19	33.29
1999	14.10	4.09	0	12.16	30.35
2000	15.51	2.20	0	17.89	35.61
2001	12.09	1.24	0	12.62	25.96
2002	11.73	.86	0	12.00	24.58
2003	11.08	2.09	0	17.43	30.60
2004	10.80	6.80	0	24.09	41.68
2005	13.23	5.86	0	44.16	63.25
2006	12.39	3.68	0	35.00	51.06
2007	11.71	10.31	0	23.92	45.98
2008	12.78	3.82	13.3	16.40	46.32
Total	152.77	51.46	13.3	260.15	477.74

Mining operations continue 24-hours a day, 365-days per year at the Fort Knox Mine. Ore and waste are mined using standard drilling and blasting techniques with shovel and haul truck fleets used for material haulage. Blast holes are sampled and assayed for production grade control purposes and material is hauled to the waste rock dumps, primary crusher, or low-grade stockpiles depending on grade.

Mining within the Fort Knox open pit occurred as planned in Phase 6 (Figure 3). Phase 4 and Phase 5 were completed in 2006 leaving Phase 6 as the only active mining phase during 2007. FGMI expanded the existing Fort Knox pit along the South and West side now referred to as Phase 7 expansion. This is anticipated to add an additional 63.9 million tons of mining production. Phase 7 stripping commenced in the 4<sup>th</sup> quarter of 2008. Stripping will continue until 2011 at which point sustained ore feed for the mill is reached. Phase 7 will allow the Fort Knox pit production to continue until 2015. Stockpile material will continue to be mined and placed on the Walter Creek Heap Leach facility until 2021. The mill is planned to operate until 2015 when mill grade material is depleted from Phase 7.

Active mining at True North has been suspended since 2004 and is not currently scheduled for 2009.

#### Pit Dewatering

As of the end of 2008, the dewatering system included a total of twenty-four inpit wells, one sump, and two causeway wells for a total of twenty-seven dewatering sources. At the end of 2007, a total of 22 dewatering sources existed. Through the course of 2008, five new wells were drilled, two on the Phase 7 perimeter, one on the Southeast corner of the pit near dispatch, and

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two within the existing Phase 6 pit. The use of one sump was discontinued. Wells were utilized as possible throughout the year with some on an intermittent basis due to freezing, seasonal water levels, and mechanical failures. Eleven new wells are planned for 2009, five in the Phase 7 region and six in the exiting Phase 6 footprint.

The average pumping rate for the year was 753.7 gpm with 477.2 gpm from the in pit wells and sump and 258.5 gpm from the causeway wells. Total pumping rate for 2008 was 8.4% lower than 2007, with the in pit well production increasing by 34.6% and the causeway reducing by 42.4%. Total water pumped to the tailing impoundment was 1,187.6 acre feet (386,677,032 gals).

# True North

Active mining at True North has been suspended since 2004 (Table 2).



Table 2

**True North Annual Mining Rates** 

	Ore	Low Grade	Waste	Total
Year	(Million Tons)	Ore	(Million Tons)	(Million Tons)
		(Million Tons)		
2001	2.38	.81	5.26	8.45
2002	3.37	1.08	7.01	11.45
2003	2.85	0	9.86	12.71
2004	1.26	0	2.51	3.76
2005	0	0	0	0
2006	0	0	0	0
2007	0	0	0	0
2008	0	0	0	0
Total	9.85	1.89	24.64	36.38

#### 2.4 MILL OPERATIONS

The Fort Knox mill has a daily capacity between 36,000 and 50,000 tons. Mill feed is first crushed to minus 6 inches in the primary gyratory crusher located near the Fort Knox pit and conveyed 2,600 feet to a coarse-ore stockpile located near the mill. The crushed material is conveyed to a semi-autogenous (SAG) mill, which operates in closed circuit with two ball mills and a bank of cyclones to further size the ore.

Correctly sized material flows into a high rate thickener and then into leach tanks where cyanide is used to dissolve the gold. Activated carbon is used in the carbon-in-pulp circuit to absorb the gold from the cyanide Carbon solution. loaded with particles gold are removed from the slurry by screening and are transferred to the gold recovery circuit gold where the



stripped from the carbon by a solution, plated onto a cathode by electrowinning, and melted into doré bars for shipment to a refinery.

The SAG mill reject conveyor, newly installed in late 2007, transports crushed SAG mill recycle material to outside stockpiles for future placement on the Walter Creek Heap Leach facility.

Mill tailings are detoxified and transferred into the Tailings Storage Facility (TSF) below the mill.

Mill operations continued as described in the Plan of Operations with the exception of the changes noted. Table 3 includes a summary of the tonnage milled from November 1996 through December 31, 2008.

The continued intense management of the tailing thickener circuit and recycling of process water in 2007 resulted in minimal usage of copper sulfate & ammonium bisulfate. With the reductions in reagent usage, FGMI anticipates lower levels of ammonia, nitrates, sulfate, copper, and TDS in the decant water.

Beginning in November of 2008, the Ft. Knox mill began adding lead nitrate, Pb(NO<sub>3</sub>)<sub>2</sub>, to the leach circuit. Lead nitrate was added at a target rate of approximately 0.1 to 0.2 lb Pb(NO<sub>3</sub>)<sub>2</sub> per ton of leachfeed. This addition rate was based on an in-depth study performed by CANMET Mining and Mineral Science Laboratory in Ottawa, Canada. Based on this study, CANMET predicted an overall increase in gold recovery in the leach circuit by approximately 5%, with the addition of lead nitrate.

Mill operations continued to focus on operational improvements to increase throughput and recovery. Mill availability was 93.9% for calendar year 2008.

A few of the 2008 events for the mill included:

- DCS control system replaced;
- New pressure washer system installed in the CIP circuit;
- Lab upgrades which included new filter presses, new lab knelson, new AA machine, and a new LIMS system;
- Support equipment upgrades which included a new forklift and skidsteer, and the addition of a used 930H tool handler; and
- A new 44 row SAG liner design was installed.

In processing; initial Test Liners ran from June 22<sup>nd</sup> to November 18<sup>th</sup>, with the second set currently running. Results from the testing indicate approximately 100 TPH gain. With the 5 <sup>1</sup>/<sub>4</sub>", the ball consumption was dropped down 10%.

In 2009 FGMI is anticipating providing gravity upgrades that would include installing a Acacia reactor to treat Kneslon concentrates and install an additional Knelson concentrator for more gold recovery.

Table 3: Fort Knox Annual Milling Rates

Mill Production		
Year	(Million Tons)	
1996	0.77	
1997	12.16	
1998	13.74	
1999	13.82	
2000	14.99	
2001	15.66	
2002	15.26	
2003	15.08	
2004	14.59	
2005	14.38	
2006	14.84	
2007	14.02	
2008	15.11	
Total	174.42	

# 2.5 TAILINGS STORAGE FACILITY (TSF)

The TSF consists of a tailings deposition area; decant pond, dam, seepage interception system, and the seepage monitoring system (Figure 4). The tailings depositional area is within the Fish Creek drainage and includes the branches along Walter Creek, Pearl Creek, and Yellow Pup drainages.



The TSF decant pond is located within the tailings deposition area upstream of the TSF dam. The TSF decant pond covers an area of approximately 349 acres and is estimated to contain 3,711 ac-ft of available water, as of December 31, 2008, for dewatering storage and reuse at the mill.

The TSF dam is approximately 4,108 feet long and 324 feet tall at the crest. It impounds all tailings generated by the mill. In addition, the mill discharges process solution to the tailings impoundment and uses the water in the tailing impoundment for makeup water. The TSF dam is designed for seepage to pass through the dam and be captured by the interception system and be returned to the tailings impoundment by the pump-back system.

# TSF Interceptor System

The interceptor wells capture groundwater flowing downstream from beneath the tailing impoundment and return it via the pump-back system to the tailing impoundment. The pump-back system includes a pump-back sump together with pumps and a pipe system to return the seepage to the TSF decant pond. The series of intercept wells developed just downstream of the dam create a hydraulic barrier that prevents any seepage from migrating further downstream (Figure 5). These interceptor wells collect groundwater and any seepage not captured in the drainage intercept system and return it to the TSF decant pond via the pump-back sump. This

system assures TSF decant seepage is collected and returned to the TSF to maintain a zero-discharge facility.

Figure 4: Fort Knox Tailings Storage Facility



The interceptor well system continues to function as designed, maintaining a continuous cone of depression across the Fish Creek valley. Interceptor well IW-2 had previously collapsed during cleaning and was replaced in 2007. The interceptor wells pump continuously with individual pumping rates ranging from approximately 10 gpm to 110 gpm (Table 4).

To enhance the system and further ensure all seepage is captured, three additional interceptor wells were constructed in April and May of 2007 (IW-7, IW-8, and IW-11) and an interception toe drain was added. There were no new interceptor wells installed in 2008 and no interceptor wells were decommissioned. However, there were 15 piezometers developed to provide a better analysis of the flow of groundwater in areas of the interceptor wells and monitoring wells.

# Tailings Storage Facility Surface Seep

In December 2006, a seep developed in bedrock immediately downstream of the tailing dam. This seep became known as 501. Site 501 is the end point for the interceptor trench that was installed spring 2007. The site is currently monitored and sampled on a quarterly basis for a Profile I surface water analysis.

801 is the site of historical surface ponding of water due to surface run-off and from a perched groundwater table. In mid September 2008 water began ponding in the 801 area. Weekly sampling was performed and continued through the middle of December until surface water was no longer present. Currently 801 is free of surface water. In the event surface water is observed during spring break up FGMI will once again conduct weekly water sampling for WAD & Total cyanide.

Table 4 & Figure 5: TSF Interceptor System Pumping Rates

Table 4	& Figure 5: TSF	Intercepto	or System Pumping Rates
	Approx.		
	Average	Well	
Well	<b>Pumping Rate</b>	Depth	
ID	(gpm)	(ft)	
IW-1	35	320	MW-1
IW-2	14	329	IW-1
IW-3	20	310	
IW-4	9	330	1W-5
IW-5	105	380	IW-2
IW-6	22	380	1W47 → 4
IW-7	24	197	
IW-8	62	184	IW-6
IW-11	18	296	
MW-1	12	305	
MW-3	6	296	IW-3
Well	8	36	MW-3
401	O	30	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\
Toe	5	n/a	
Drain	3	11/ a	IW-7
Total	340		IW-8
			IW-11
			The last the

# TSF Decant and Seepage Metals Concentrations

Arsenic, antimony, selenium and lead concentrations continue to be analyzed in the TSF decant and seepage reclaim water during 2008 (Figures 6, 7, 8, & 9). The decant water analysis results indicate that arsenic, antimony, and selenium concentrations increased significantly as a result of introducing True North ore into the mill tailings beginning in 2001 and ending in 2004.

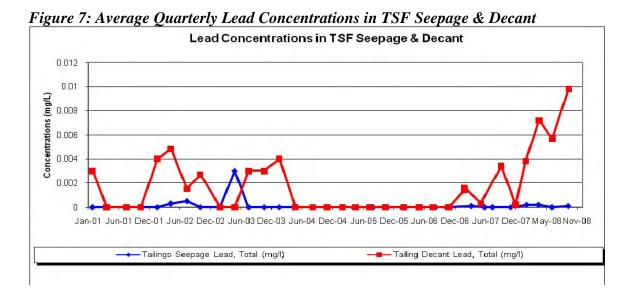
A trend of decreasing arsenic, antimony, and selenium concentrations can be identified from 2004 through 2007 in Figures 5, 7, & 8. Lead is occasionally detected in the TSF decant and seepage but most often not detected in collected samples (Figure 7).

#### 2.6 FRESH WATER SUPPLY RESERVOIR & WETLANDS

Construction of the wetland complex between the Tailings Dam and the Freshwater Dam began in 1998. A significant population of Arctic grayling and Burbot has developed in the freshwater habitat provided by the WSR and the wetlands complex. The Alaska Department of Natural Resources Office of Habitat Management and Permitting recently completed a report on results from the ongoing fish population and habitat study at Fort Knox.

Figure 6: Average Quarterly Arsenic Concentrations in TSF Seepage & Decant Arsenic Concentration TSF Seepage & Decant 1.2 Concentration (mg/L) 9.0 9.0 9.0 0.2 Jan-01 Jun-01 Dec-01 Jun-02 Dec-02 Jun-03 Dec-03 Jun-04 Dec-04 Jun-05 Dec-05 Jun-06 Dec-06 Jun-07 Dec-07 May-08 Nov-08

Tailings Seepage Arsenic, Total (mg/l) Tailing Decant Arsenic, Total (mg/l)



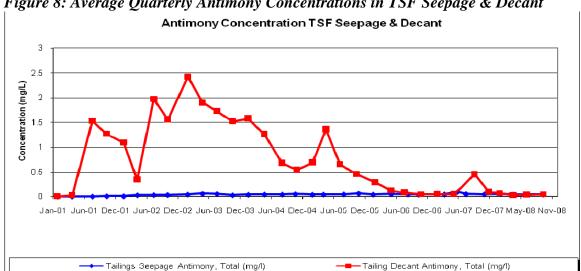
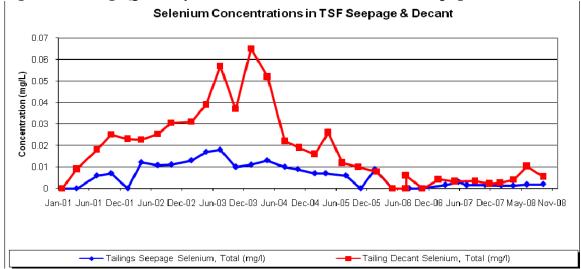


Figure 8: Average Quarterly Antimony Concentrations in TSF Seepage & Decant





Successful spawning by Arctic grayling in the wetland complex has occurred every year since spring of 1999. In 2007, peak spawning activity occurred between May 16 and May 18. Spawning in Lower Last Chance Creek was again limited due to the formation of extensive aufeis.

Aufeis is an accumulation of ice formed when water from a spring or stream freezes on top of previously formed ice. Lower Last Chance Creek stream channel was modified in 2008 to discourage future aufeis accumulation and allow for aquatic access to spawning habitat (see Section 3.6).

Fish surveys and habitat studies began in 1992, prior to the development of the Fort Knox Mine. At that time, arctic grayling were characterized as stunted, fish larger than 9 inches were rare, and mature fish were typically less than 6.5 inches. A goal was set to develop habitat to support an Arctic grayling population of 800 to 1,600 fish of an average size greater than 8 inches.

The estimated population for Arctic grayling in 2006 was 5,930 fish larger than 8 inches.

The burbot population increased substantially after flooding the Fresh Water Reservoir and the number of large burbot (greater than 15 inches) has remained fairly stable since 2001.

#### 2.7 RECLAMATION

#### Fort Knox

Reclamation opportunities in 2008 were limited at Fort Knox due to the potential for further disturbance during planned mining activities. To date the latest reclamation occurred in the borrow areas used to construct the final TSF dam raise in late summer 2006 and continued in 2007 (Figure 10). Regrading and channel construction was completed for all four borrow areas during 2007. The current reclamation plan for the Fort Knox Mine has been revised to reflect the life of mine plan of operations including the Walter Creek Heap Leach facility. The plan includes a detailed closure plan for the Tailing Storage Facility and a revised life of mine reclamation plan for Fort Knox. At Fort Knox, growth media continues to be stockpiled for use as necessary in final reclamation and closure. Table 5 summarizes the volumes of topsoil stockpiled at Fort Knox for future use as growth media.

Table 5: Fort Knox Growth Media Stockpile Quantities

Tubic 5. 1 ori Knox Growin Media Stockpile Quantities				
	Volume			
Stockpile Area	(Cubic Yards x 1,000)			
Yellow Pup Stockpile	6,427			
TSF South Stockpile	291			
Pit Perimeter Stockpile	69			
Fresh Water Res. Stockpile	1,740			
TSF North Stockpile	3,186			
Yellow Pup Phase 6 Stockpile	513			
Walter Creek Stockpile	440			
Heap Leach Stockpile	1,500			
Phase 7 Media Stockpile	114.2			
Total	14,280.20			

#### True North Mine

No additional growth media was stockpiled at True North during 2008. Table 6 summarizes the volumes of growth media stockpiled at True North for future use. The current stockpiled material is adequate to cover all existing disturbance to be reclaimed with one-foot of growth media.

Historic reclamation for the True North Mine site encountered stability issues. The original reclamation that began in 2005 encompassed 124 acres. Only 100 acres was successfully stabilized. The 24 acres that were not successfully stabilized is an of slope failure resulting from a slump. Currently, the movement of the slump is being monitored by tracking the movement of established survey points. Once the slump is deemed stable, the area will be regraded and vegetated.

The 100 acres of reclaimed land for which a partial release of financial assurance has been requested are deemed to be stable and are estimated to have greater than 70% vegetative cover.

Seed and fertilizer were applied on all reclaimed disturbance using either a broadcaster mounted on a D4 dozer or by aerial application using a fixed wing aircraft.

The seed mix applied was comprised of 50% Arctared Red Fescue, 20% Tundra Glaucous Bluegrass, 20% Gruening Alpine Bluegrass, and 10% Tufted Hairgrass. The seed application rate was approximately 11 lbs/acre. Fertilizer was applied at a rate of 300 lbs/acre with an N-P-K analysis of 20-20-10.

Table 6: True North Growth Media Stockpile Quantities

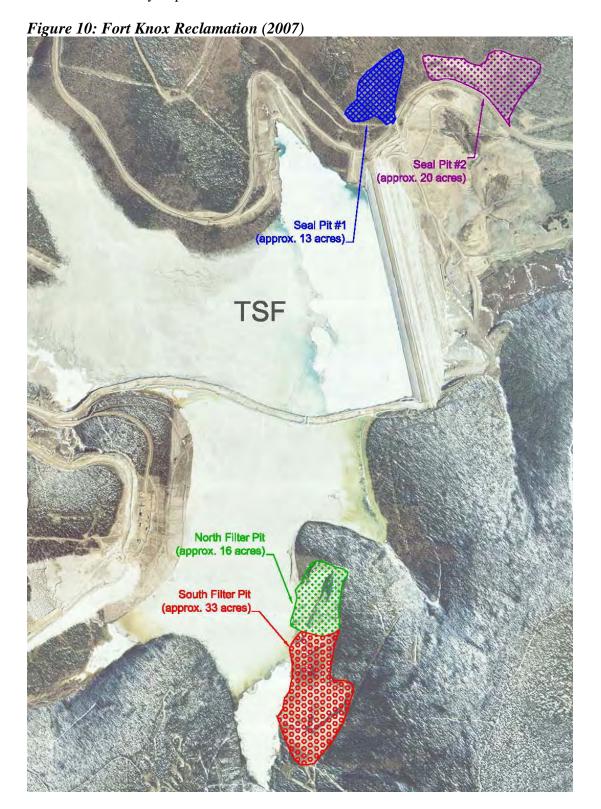
Stockpile Area	Volume (Cubic Yds. x 1,000)
Shop Growth Media Stockpile	720
Louis Creek Growth Media	25
Stockpile	
East Pit Growth Media Stockpile	53
North Dump Growth Media	145
Stockpile	
Shop Assorted Road Berms	51
Shop Dump Berms	163
Zeppelin Dump Berms	122
Total	1,279

#### Financial Assurance

Financial assurance has been adjusted to reflect the proposed changes in future operations at Fort Knox (Table 7). FGMI posted a Reclamation Bond with the State of Alaska Department of Natural Resources (ADNR) and State of Alaska Department of Environmental Conservation (ADEC) for \$37,614,878.84. This bond amount is based on updated reclamation and closure costs calculated in 2007 and approved by ADNR and ADEC (Table 7). The life of mine plan also includes a design, construction, and closure plan for the Walter Creek Heap Leach facility.

Table 7: Financial Assurance Bond Calculation

Tubie 7. Pinanciai Assurance Dona Calculation		
	Amount	
Plan/Permit/Lease #	(\$)	Descriptions
Fort Knox Lease Nos. ADL 414960 and 414961, Plan	\$34,314,418	Fort Knox Mine
of Operations Approval F20079852, and Waste		Reclamation and
Management Permit 2006-DB0043		Closure
Lease #ADL 416509 True North Plan of Operations	\$1,301,100.00	True North Mine
Mill Site		Project Mill Site
Approved True North Reclamation and Closure Plan	\$1,155,774.00	True North Plan of
		Operations
Lease #ADL 416471 True North Plan of Operations	\$80,000.00	True North Access
Approval		Road
Post Reclamation Maintenance	\$734,536.84	
TOTAL	\$37,614,878.84	
	•	



# 2.8 WALTER CREEK HEAP LEACH FACILITY

Fairbanks Gold Mining, Inc. has started construction of a 161 million-ton capacity heap leach pad within the Walter Creek drainage above the existing tailing storage facility. The final required permit from the US Army Corps of Engineers Alaska District was received on October

31, 2007. Stage 1 tree clearing and organic stripping has been completed. Valley bottom & embankment foundation excavation has been completed in 2008. The valley fill heap leach facility will have a footprint area of approximately 310 acres not including access roads or haul roads. Knight Piesold and Co. has prepared a design report as part of the State of Alaska Dam Safety program requirements.

Ore for the heap leach will consist of run-of-mine rock from the Fort Knox Pit and various stockpiles. Currently, 96.8 million tons of lower grade ore are located in the Barnes Creek and Fish Creek stockpiles which will be heap leached. The ore is characterized by relatively high permeability that will promote solution flow and drainage for rapid rinsing at closure.

In-heap storage of process solution and storm water will be accomplished by constructing an embankment in the downstream toe of the heap. The mechanical quality of the rock planned for construction of the in-heap storage embankment is expected to be similar to the mechanical quality of the rock that has been used to construct the downstream random fill for the Fort Knox TSF dam. The liner system for the pad will by underlain by 12 inches of compacted sub-base over the entire basin.

In the area of the in-heap storage reservoir, there will be two linear low-density-polyethylene (LLDPE) liners over the sub-base. Beyond the limits of the in-heap storage reservoir, there will be a single LLDPE liner overlaying the sub-base. Overlaying the LLDPE liner, 36 inches of cover material consisting of crushed rock will be placed with a network of drainpipe to maintain low head pressures on the liner and promote a rapid flow of solution to the in-heap storage reservoir.

Barren solution will be applied on the heap leach using drip emitters. The solution will flow through the run-of-mine ore. Pregnant solution will flow to the in-heap storage reservoir, which will have an operating capacity of 58 million gallons and a total storage capacity of 110 million gallons. The in-heap storage reservoir is designed to contain the 100-year, 24-hour storm event, the average 30-day spring breakup, draindown of the heap plus provide three feet of freeboard.

The pregnant solution that collects in the in-heap storage reservoir will be pumped to the Carbon-In-Columns (CIC) plant. Barren solution and pregnant solution will be pumped in pipes between the pad and the CIC plant. Loaded carbon will be processed in the Fort Knox mill facilities with all solution moved in pipes and the pregnant solution reporting to the in-heap storage reservoir.

# 3.0 PROJECTED ACTIVITIES FOR FISCAL YEAR 2009

# Table 8: 2009 Project Summary

Phase 7 Stripping
Heap Leach (2008 Carryforward 2009)

Heap Leach 2009

Tailing Expansion

Dewatering

• ALPM Shop Construction

Definition Drilling

Tailing Deposition

EX5500 Bowl and Backboard

• Heap Leach Startup

New Dozer

Gravity Upgrades

#### 3.1 PERMITTING ACTIVITIES AND LAND STATUS

In December, a meeting was held with the Large Mine Permitting Team (LMPT) and the U.S. Army Corps of Engineers to provide them with insight on the options being considered for expansion of the tailing impoundment.

A large raise of the existing dam or a small raise of the existing dam with the causeway being developed as a dam were identified as the probable options. The preferred alternative for FGMI is to raise the existing dam 22 feet and construct a causeway dam providing increased capacity of 183 million tons. A dam raise will be essential for increased tonnage processed thru mill and will provide:

- Improved gold production;
- Heap leach;
- NOAA Land Acquisition; and
- Water Balance.

Due to the detection of cyanide in ponded water at Site 801, weekly WAD & Total CN sampling is on-going at 11 surface water and groundwater sampling points. No cyanide has been detected, but most surface sites are frozen or have quit producing water.

FGMI has requested a site specific Minimum Detection Limit (MDL) and Minimum Quantification Limit (ML) for WAD cyanide based on a laboratory's ability to produce results in clean water. FGMI has previously been required to accept the regulatory standard of 0.0052 mg/l. The laboratory's MDL is .005 mg/L and the ML is 0.02 mg/l. The ML will be the compliance standard. FGMI is considering undertaking an MDL/ML study based on site specific water which with its inherent interferences would likely increase the ML to 0.03 and possibly higher. ADEC has verbally accepted the change and written approval is anticipated in April.

FGMI worked out a verbal agreement with ADEC to revise the Fort Knox Monitoring Plan to reflect a change in the compliance requirements for Fort Knox that will eliminate the exceedances that have been routinely occurring throughout the life of the mine. Once the change is approved, monitoring will focus on nine parameters that are indicators of decant water from the tailing impoundment rather than focusing on water quality standards that are exceeded by conditions that existed prior to development of Fort Knox. This change is possible since Fort Knox is a zero discharge facility and the purpose of the monitoring is to demonstrate that no discharge is occurring. Approval is anticipated in April.

A Certificate of Approval to Modify the Tailings dam by constructing a working platform on the upstream face of the dam was issued by the Alaska State Dam Safety Engineer. The platform is being constructed to preserve the option of a large dam raise for additional tailing capacity.

The financial assurance for Fort Knox and True North will be updated in 2009. Major changes in the amounts of financial assurance required are not anticipated.

#### 3.2 PUBLIC SAFETY

FGMI will continue to control dust and maintain signs and safety berms on all roads accessible by the public. FGMI will also continue to manage and operate the road and overpass in a manner that is safe for all users. FGMI will continue to implement its employee-driven safety program to reduce the number of injuries to Fort Knox and True North employees.

The Fort Knox Toxic Release Inventory (TRI) is being completed for the reporting year of 2009. The TRI report is expected to be completed by March 2009. The TRI report will accurately represent all of the materials to provide the community and all citizens of the chemical hazards that exist in their areas. The 2008 chemical inventory information will be made publicly available on several EPA databases.

# 3.3 MINE OPERATIONS

Table 9 contains the planned mining for calendar year 2009 at the Fort Knox Mine.

Table 9: Planned Mining Tons for Calendar Year 2009

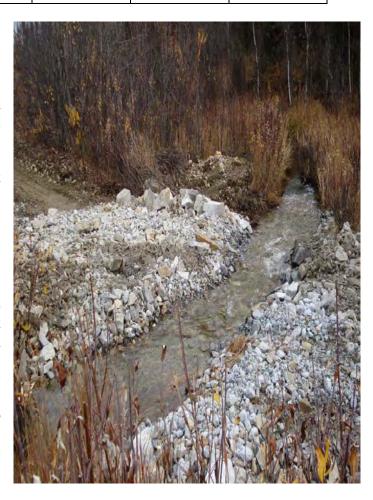
(Tons x 1,000)	Mill Grade	Low Grade	Leach Stockpile	Waste	Total
Fort Knox	13,510	4,496	13,303	20,671	51,980

#### 3.4 MILL OPERATIONS

Projected mill throughput for 2009 is approximately 14.7 million tons. This is assumed to be completed by having a feed rate of 1,767 tph and the mill availability at 95 percent. The grade is projected to be 0.0233 opt. Overall there should be recovery of at least 82.37 percent equaling 282,315 ounces produced.

# 3.5 TAILINGS STORAGE FACILITY (TSF)

Tailings deposition will continue to be in the main pond (Barnes Creek drainage) and Yellow Pup/Pearl Creek drainage. Tailing deposition will focus on maximizing water recovery along with managing the operating pool within the impoundment to accommodate re-circulation of process water. To maximize the use of the



TSF, FGMI will no longer be able to transport tailings via gravity. The addition of pumps and associated piping will be required to maximize the complete tailings storage area. These pumps will be installed in the fall of 2009.

A revised Fort Knox Monitoring Plan was approved by ADEC in June 2008. The revised monitoring plan is designed to monitor for leakage from the tailing impoundment rather than compliance with discharge standards. Approval of the revised monitoring plan will minimize, if not eliminate, the routine exceedances encountered due to the existing background conditions resulting from past disturbance prior to the construction of Fort Knox.

#### 3.6 FRESH WATER SUPPLY RESERVOIR & CONSTRUCTED WETLANDS

Operation of the water supply reservoir will continue as described in the Plan of Operations. The Fish study being conducted by the Alaska Department of Natural Resources Office of Habitat Management & Permitting will continue with spring monitoring of population and growth rates along with water quality monitoring.

Habitat maintenance consisting of beaver dam removal and modifying Last Chance Creek was completed in 2008. Modifications to Last Chance Creek are intended to reduce the development of aufeis which will allow the water to warm more quickly in the spring and improve spawning success.



The Lower Last Chance Creek bed was trenched approximately 3 to 5 feet below the surface in five different locations. There was a total of 500 feet disturbed throughout the 5-100 foot project portions. The width throughout these project areas ranged 3 to 6 feet.

In order to accommodate high velocity; material larger than the previously stated (-) 3.5 inch sized granite was required. Backfill material ranged from 3.5 inch to 12 inch granite. The

larger materials appear to be fully accommodating the subsurface flow as planned. The beaver dam located at the channel outlet to the fresh water reservoir was removed. This area of the creek is currently accommodating flow. Visual observations of this area provided assurance that the removal of the dam will accommodate adequate flow for fish passage.

Based on visual observations the trenching and placement of the new creek bed material appear to be accommodating the high velocity flows. It is anticipated that the creek bed modification activities will fulfill all for the requirements to alleviate the build-up of aufeis and accommodate fish passage and spawning.

# 3.7 **RECLAMATION**

Reclamation of the borrow areas at Fort Knox as described in Section 2.7 will continue in 2009 with additional seed and fertilizer applications to promote rapid revegetation and slope stability. A native seed mix, approved by the DNR, and fertilizer mix will be applied to further establish vegetative cover at the borrow areas. At the True North Mine, approximately 25 acres within the 124 acres reclaimed in 2004 will receive additional seed and fertilizer to enhance revegetation.

#### 3.8 WALTER CREEK HEAP LEACH FACILITY

Construction of the Walter Creek Heap Leach facility began on October 31, 2007. Construction activities during 2008 were limited due to a record breaking rainy season. Activities consisted of excavation, grading, manufacturing construction materials, placement and compaction of these materials followed by and placement of the liner. Ore placement and active leaching is planned for late 2009. A summary of 2009 activities include:

- Earthworks construction to get the Pad ready for loading;
- Constructing the PCMS, and LCRS,
- Constructing the in-heap storage pond, solution recovery wells and commissioning of the CIC plant.
- Placement of Fill to from the North end with a10% grade down into the valley for Haul Truck access;
- Placement control for Overliner Material (mainly on side slopes);
- A portion of Stage 1 liner will need to be completed to allow the construction of the Embankment Haul Road. This will need to be complete during the 2009 construction season along with the rest of stage 1. Stage 2 construction and liner placement is also planned for 2009.
- Maximizing ROM stacking based on the valley geometry in order to flood as soon as possible during the warmer summer months

# 4.0 MINE WATER USAGE (WATER BALANCE)

The water balance accounts for natural water inflows/outflows and water use throughout the mine-site. Inflows into the mine site include precipitation (i.e. rain and snow) and groundwater. Average precipitation at the mine is approximately 16.7 inches per year of rain and snow. The primary water use processes at Fort Knox are (Table 9 & Figure 11):

- Pumping from the WSR to the Mill;
- Pit dewatering to the TSF;
- Pumping TSF decant water to the Mill;
- Pumping from the WSR to the TSF;
- TSF interceptor system; and

• Mill process water discharge to the TSF.

Table 10: Fort Knox Water Balance Summary for 2008

	Volume
Water Balance Process	(ac-ft)
Fresh Water Reservoir (WSR) to Mill	489
Fresh Water Reservoir (WSR) to TSF	328
TSF to Mill	15,474
Mill to TSF (Estimated Water in Tailings	15,964
Slurry)	
Pit Dewater to TSF	1187.6
Seepage Reclaim (Interceptor System)	2,894

No water was pumped from the well at True North. Temporary Water Use Authorization TWUA A2001-96 authorizes pumping of the water from the True North well. No pumping from Little Eldorado Creek occurred in 2008. The TWUA F2002-14 authorizes taking water from the surface water source.

Figure 11: Mine Water Use Diagram

