

# ANNUAL ACTIVITY REPORT for REPORTING YEAR 2014



February 27, 2015

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### 1. INTRODUCTION

Fairbanks Gold Mining, Inc. (FGMI), a wholly owned subsidiary of Kinross Gold Corporation, 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 Waste Management Permit 2014DB0002 for the Fort Knox Mine.

The Fort Knox mine includes the Fort Knox open pit mine, mill, tailings storage facility, water storage reservoir and the Walter Creek Heap Leach facility. Major reclamation activities at the

True North Mine were completed in 2012. Postclosure monitoring and maintenance activities continue at True North. These facilities are located within the Fairbanks North Star Borough, approximately 25 highway 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 2014, FGMI employed 649 people. Fort Knox produced 387,285 ounces of gold in 2014.



2014 Family Day

This report describes the permitting, mining, milling, heap leach and reclamation activities during calendar year 2014 and planned activities for 2015.

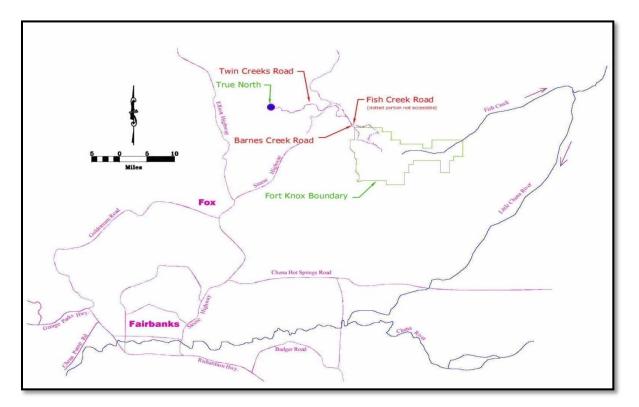


Figure 1: Facility Locations

## 2. SUMMARY OF ACTIVITIES

In 2014, Fort Knox had a range of activities underway in the areas of production, construction, and permitting. In summary, these activities included:

- Construction of Stage 4 of the Walter Creek Heap Leach was completed;
- Construction of Stage 5 of the Walter Creek Heap Leach was initiated and approximately 20% completed;
- Construction of the Walter Creek Heap Leach Facility Barren Solution Booster Pump Station was initiated;
- Construction of the 25-foot raise to the TSF Dam was initiated and 11feet of the raise was completed.
- Onsite land farming continues at the Yellow Pup Waste Rock Dump for the former Fish Creek Fuel Island decommissioning material;
- Phase 8 pit stripping activities initiated, and;
- True North reclamation completed in August 2012 and is under post-closure monitoring.



In 2015, the major activities planned include:

- Complete construction of Stage 5 of the Walter Creek Valley Fill Heap Leach;
- Construction of the remaining 14 feet of the 25-foot raise of the TSF dam;
- Obtain approval for relocation of the fuel island;
- Construction of the relocated fuel island;
- Obtain approval to reroute the RS2477 trail that will be disrupted by the Barnes Creek Waste Rock Dump expansion;
- Complete construction of the Walter Creek Heap Leach Facility Barren Solution Booster Pump Station;
- Replacement of the 12-foot culvert at the Solo Creek Causeway at the water storage reservoir (WSR);
- Begin discharge of non-contact, non-process groundwater from dewatering wells in accordance with APDES Permit No. AK0053643, and;
- Construct the TSF Dam base working platform to elevation 1525 feet mean sea level (fmsl).

# 3. PERMITTING ACTIVITIES

The following is a list of the approved plans and permits issued to FGMI in 2014:

- In January, Alaska Department of Commerce, Community, and Economic Development issued Alaska Business License #272545;
- In January, the Fire Marshal issued a Certificate of Approval, Plan Review #2014COR1000 for amendment to the fuel island;



- In February, the second amendment to the Upland Mining Lease ADL535408 became effective for the lease extension of an additional 20 years;
- In February, ADNR issued a Certificate of Approval to Operate a Dam Walter Creek Heap Leach Pad Dam (AK00310);
- In March, ADNR approved the expansion of the Walter Creek Heap Leach Facility from 161 million tons to 307 million tons;
- In March, ADNR approved the expansion of the Barnes Creek Waste Rock Dump;
- In March, ANDR approved the Fort Knox Reclamation and Closure Plan;
- In March, ADEC issued Waste Management Permit No. 2014DB0002;
- In April, ADNR issued the seasonal burning permit;
- In April, ADNR accepted the Fort Knox Mine Mining Reclamation Bond in the amount of \$96,164,867.00;
- In April, ADEC Division of Air Quality issued the Final Title V Air Quality Control Operating Permit No. AQ0053TVP02, Revision 1;
- In May, ADNR issued a Revised Certificate of Approval to Modify a Dam, Fort Knox Tailings Dam (AK00212);
- In May, ACOE issued a permit modification for filling 2.0 acres of wetland for the expansion of the Yellow Pup Waste Rock Dump;
- In May, Alaska Department of Revenue issued the annual Mining License;
- In July, ACOE issued a permit modification for clearing 10.4 acres of wetland for construction of a borrow source for the TSF dam raise and for filling 0.85-acre of wetland for the construction of an access road;
- In September, ADNR approved the Plan of Operations amendment for clearing 5 acres for the construction of the realigned dewatering access road for the Phase I Mining Plan;
- In October, ADNR approved the construction of the Walter Creek Heap Leach Facility Barren Solution Booster Pump Station;
- In November, ADNR issued a Certificate of Approval to Operate a Dam for the Fort Knox Tailings Dam (AK00212);
- In November, Alaska Department of Fish and Game issued Fish Habitat Permit FG93-III-0202, Amendment #1, Culvert Installation, Repair, and Maintenance, Solo Creek;



- In November, ADNR issued the Temporary Certificate of Approval to Operate a Dam for the Walter Creek Heap Leach Pad Dam (AK00310), and;
- In December, ADEC approved construction of the pit dewatering well groundwater pipeline and outfall system.

The following is a list of the planned permitting activities for FGMI in 2015:

- Obtain approval from ADNR, ADEC, and Fire Marshal for relocation of the fuel island;
- Submit a plan of operations amendment for a 17-foot TSF Dam raise from elevation 1540 fmsl to 1557 fmsl;
- Obtain approval to clear and grub the Walter Creek Heap Leach Facility's Stage 6 area;

- Obtain approval from the Army Corps of Engineers (ACOE) for construction of the pit dewatering well groundwater outfall structure under Nationwide Permit 7 for Outfall Structures (received January 27, 2015), and;
- Obtain approval from ADNR for constructing the TSF Dam base working platform to elevation 1525 fmsl.

### 4. LAND STATUS

The project area encompasses approximately 7,982 acres, of which there are no federal lands. The project area includes the Amended and Restated Millsite Lease, Upland Mining Lease, private land. The Amended and Restated Millsite Lease contains approximately 5,828 acres of State of Alaska land. FGMI private land holding is approximately 2,154 acres, which includes the private land of the Upland Mining Lease (approximately 1,179acres).

### 5. SAFETY

#### PEOPLE

Keeping safety at the forefront of everything we do at Kinross Fort Knox is the first and most

important priority! In 2014 Kinross Fort Knox achieved many great safety accomplishments Mine Wide. Two Million Safe Hours Worked was achieved in May.

The Administration Group (Warehouse, Health & Safety, Environmental, Accounting, Human Resources, and Technical Services) has not had a loss time incident (LTI) since April 2005. The group also worked five years without a reportable incident.

The Ore Processing Groups include Maintenance (MMTC) and Operations; together they have achieved three years without an LTI

in June. Operations alone reached two years without a reportable incident. MMTC alone achieved 11 years without an LTI.

Mobile Equipment Maintenance (MEM) has achieved eight years without an LTI and 1.5 Million Safe Hours Worked.

The Mine Operations Department alone reached a milestone of One Million Safe Hours worked without an LTI.

All Employees within the Fort Knox Team; whether Exempt or Non-Exempt, are a part of the Safety Culture. Safety programs such as SOS (See It, Own It, Solve It) and STOP Audits allow us to be aware of our behavior along with our coworkers. Fort Knox's own internal Living Our Values Awards during the Holiday Season helps us remember our core values while also recognizing several outstanding employees. A few other safety implements used mine wide include Field Level Risk Assessment (FLRA) and Job Hazard Analysis (JHA).



#### INTERNATIONAL CYANIDE MANAGEMENT CODE

Fort Knox is a signatory company of the International Cyanide Management Code for the Manufacture, Transport, and Use of Cyanide in the Production of Gold (Code). The Code's development occurred in the early 2000s and implemented in 2005 for safe and responsible management of cyanide by an international multi-stakeholder committee under the auspices of the United Nations Environment Program (UNEP) and is administered by the International Cyanide Management Institute (ICMI). As a signatory company, Fort Knox is required to meet the Code's Principles and Standards of Practice criteria, which is verified by strict independent third-party auditing. Fort Knox achieved Code certification in February 2008, received recertification in September 2011 and most recently February 2015. Fort Knox certification summary audit reports may be found at <a href="http://www.cyanidecode.org">http://www.cyanidecode.org</a>.

#### MINE ACCESS

FGMI continues to maintain the mine access roads from the Steese Highway to Fort Knox and True North (Figure 1). The road surface is graded to insure a smooth running surface and proper

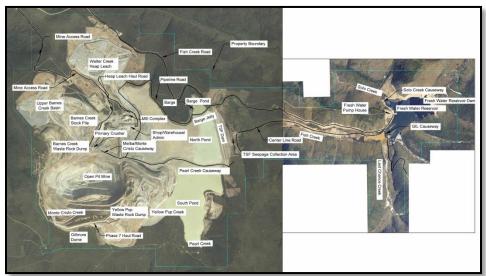


drainage. During the winter months, the Fort Knox road is kept free of snow and is sanded as necessary to maintain safe operating conditions. The True North road is plowed for snow as needed during the winter months since access to the site is not routinely required. In the summer months, FGMI uses calcium chloride and water for dust suppressants on the Fort Knox access and mine-site roads. These measures

have limited the amount of fugitive dust on these roads. In 2014, Fort Knox received a general complaint of road dust on the access road between the Steese Highway and mine.

FGMI Security continues to patrol the mine site and access roads to ensure the safety of our employees, contractors, guests, and the public. Access is limited based on need and function. Safety training is tailored in a similar manner.

Figure 2: Local Roads and Mine Facilities



### **Recreational Trails**

During the initial Millsite Lease application process a series of public meetings were held to identify trail systems that would potentially be affected by mining activities. In 2011, Fort Knox initiated meetings with ADNR Trails and Easement Section to start the process of rerouting trails for future use. Meetings with ADNR continued in 2013. A formal application was submitted to the Trails and Easement Section with an alternate route in 2013. As part of this process, a public notice and comment period occurred in 2014. It is anticipated that a decision document will be issued by ADNR in 2015.



Cleary Summit Highway Clean Up

## 6. MINE OPERATIONS

#### **PIT PRODUCTION**

In 2014, FGMI mined 49.24 million tons of ore and waste from the Fort Knox pit with an average production rate of 134.9 thousand tons per day (Table 1).

Year	Mill 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	35.60
2001	12.09	1.24	0	12.62	25.95
2002	11.73	.86	0	12.00	24.59
2003	11.08	2.09	0	17.43	30.60
2004	10.80	6.80	0	24.09	41.69
2005	13.23	5.86	0	44.16	63.25
2006	12.39	3.68	0	35.00	51.07
2007	11.71	10.31	0	23.92	45.94
2008	12.78	3.82	13.3	16.40	46.30
2009	11.96	4.11	12.70	20.03	48.80
2010	11.95	1.35	8.52	20.59	42.41
2011	3.96	.13	4.76	25.70	34.55
2012	10.42	3.19	14.98	34.53	63.12
2013	9.38	4.88	9.59	39.43	63.28
2014	6.83	4.94	4.64	32.83	49.24
Total	207.28	70.06	68.49	433.26	779.09

Table 1: Fort Knox Annual Mining Rates

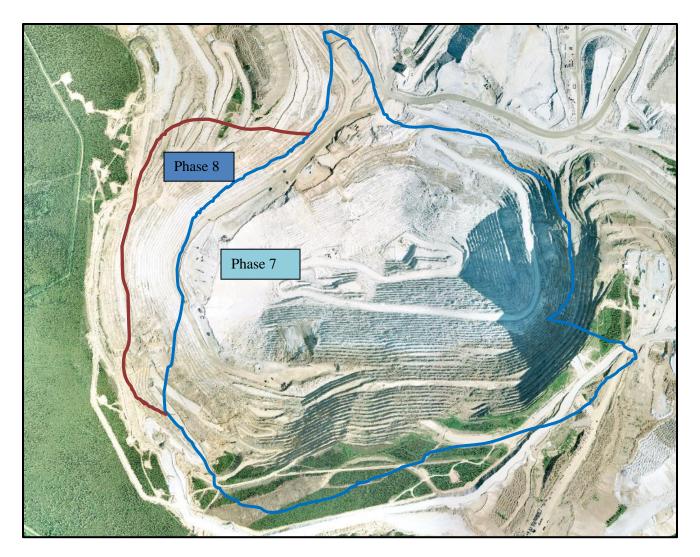
Mining operations continue 24-hours a day, 365-days per year at the Fort Knox Mine. Ore and waste are mined using standard drilling and blasting techniques with shovel and haul truck fleets to move the material. Blast holes are sampled and assayed for production grade control purposes and material is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

In 2014, mining within the Fort Knox open pit occurred in Phase 7 and Phase 8 (Figure 3). Phase 7 stripping commenced in the  $4^{th}$  quarter of 2008. Stripping for phase 7 continued into 2012 before sustained ore was achieved.

In 2015, the final pit layback area known as Phase 8 is scheduled to continue mining activities. This phase of the pit is planned to deliver ore to the mill and the leach pad from 2015 until mining activities end in 2019.

Figure 3: Fort Knox Pit Phases





#### DEWATERING

As of the end of 2014, the dewatering system included a total of 28 dewatering wells, including one which was inactive, and four Fish Creek wells (located north and out of the pit in the Barnes Creek/Fish Creek drainage). Through the course of 2014, four wells (DW-210, DW-230, DW-223, and DW-237) were taken offline, three due to mining expansion, and one due to casing failure at depth. Four new wells were added, three in the pit (DW-345, DW-354, and DW-356) and one in the Fish Creek drainage (DW-355).

The average pumping rate from the dewatering system in 2014 was 1,608 gpm, which was 144% higher than in 2013. The increase anomaly can be attributed to the area's record rainfall throughout the summer of 2014. Approximately 75% of dewatering flow was pumped to the tailing impoundment. Approximately 25% was pumped directly from the Fish Creek wells to the Mill.

Select piezometers are monitored twice weekly for changes in water levels and the remaining piezometers are monitored quarterly.

Since the Tailings Storage Facility (TSF) design did not have capacity to contain all water until the end of mine life, an Alaska Pollutant Discharge Elimination System (APDES) permit application was submitted to the Alaska Department of Environmental Conservation (ADEC), Division of Water in early 2012. ADEC granted FGMI an APDES permit in August 2012 and effective October 2012 to discharge non-process and non-contact groundwater extracted from pit dewatering wells into the Old Fish Creek Channel from which it will flow to the freshwater reservoir. Since receiving the APDES permit, and through 2014 there has been no discharge of dewatering well water.

# 7. MILL OPERATIONS

Mill feed is first crushed to minus 6 inches in the primary gyratory crusher located near the Fort Knox pit and then conveyed to a coarse-ore stockpile located near the mill. The crushed material is conveyed to a semi-autogenous (SAG) mill. The SAG mill operates in open circuit and feeds two ball mills. The ball mills operate in closed circuit through cyclone packs. The cyclone packs regulate the size of material that is allowed to move beyond the grinding circuit. A gravity gold recovery circuit operates in conjunction with the grinding circuit. It consists of three Knelson concentrators.

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 solution. Carbon particles loaded with gold are removed from the slurry by carbon screens and are transferred to the gold recovery circuit. In this circuit, the gold is stripped from the carbon using a strong alkaline cyanide solution in conjunction with high temperature and high pressure. The gold is recovered from this solution by electro-winning, where it is plated onto a cathode. The gold is removed from the cathode mechanically and melted into doré bars for shipment to an offsite refinery for final processing.

Some hard ore of a critical size is rejected from the SAG mill in order to increase throughput. This material is crushed and stockpiled for use on the Walter Creek Heap Leach Facility. Mill tailings are discharged into the TSF below the mill. Table 3 displays a summary of the tonnage milled from November 1996 through December 31, 2014.

The mill continues to focus on operational improvements to increase throughput, recovery, efficiency and reliability.

#### Table 2: Fort Knox Annual Milling Rates

Year	Mill Production (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
2009	14.14
2010	14.56
2011	14.88
2012	14.55
2013	13.96
2014	14.92
Total	261.43

The projected mill throughput for 2015 is approximately 14.7 million tons and gold production is estimated at 232,570 ounces.

### 8. HEAP LEACH

The Walter Creek Valley Heap Leach Facility was brought into production in 2009. On October 13, 2009, ADNR issued a Certificate of Approval to operate the heap leach dam. On October 14, 2009, FGMI began filling the in-heap storage pond. In November 2009, FGMI had the first gold



pour from heap leach production. In 2014, approximately 28.5 million tons of ore were placed on the heap leach. Since the loading of heap leach ore began in 2009, a total of approximately 132.9 million tons have been placed on the heap leach, and 601,885 ounces of gold have been produced.

In 2011, construction of Stage 3 of the heap leach pad began and its construction completed in 2013. The Stage 4 construction of the heap leach pad

began in 2012 and was completed in 2014. The Stage 5 construction began in 2012 with clearing and grubbing, and construction will continue in 2015. Projected heap leach ore placement for

2015 is 30.0 million tons. The heap leach gold production for 2015 is estimated to be 158,087 ounces.

# 9. TAILINGS STORAGE FACILITY (TSF)

The TSF consists of deposited tailings, decant pond, dam, seepage interception system, and the seepage monitoring system. The tailings depositional area is within the Fish Creek drainage and includes portions of the Walter Creek, Pearl Creek, and Yellow Pup drainages.

The TSF has three distinct ponds: the barge pond, north pond and south pond where the decant water pools. These ponds are located within the tailings deposition area upstream of the TSF dam. The barge pond is approximately 18 acres. The north pond fluctuates in size but covers an area that generally ranges from 300 to 400 acres. The south pond will fluctuate slightly, but should remain close to 245 acres. A bathymetric survey conducted in September 2014 showed the decant pond contains approximately 7,760 acre-feet of water. The increase in the pond's volume is attributed to the area's record setting rainfall



TSF Dam Raise Construction

throughout the summer of 2014 and does not represent the normal operating level of the TSF. Water management activities continue to be evaluated and implemented [i.e., storm water control, dewatering well groundwater discharge (APDES Permit No. AK0053643)] to reduce the additional volume created by the summer long precipitation event.

The TSF dam is approximately 4,390 feet long and 352 feet tall at the crest. It impounds all of the tailings generated by the mill. The TSF and the mill form a closed system for process water. Water used in the mill is pumped from the decant pond and process water which has had the cyanide level reduced to low levels is returned to the decant pond in the tailings slurry.

#### **TAILINGS DEPOSITION**

During the 2011 through 2014 construction seasons, tailings were deposited along the dam face by spigoting. The main tailings line ran along the upstream dam face at the 1515 elevation of the engineered random fill. The tailings flowed into 8-inch spigot pipes evenly spaced along the dam face. The purpose of the spigoting is to develop a beach 300 to 500 feet in width against the upstream face of the dam. The beach will improve the dam's Factor of Safety and enhance its long term stability.

#### **TSF DAM RAISE**

Construction of a 52-foot raise of the TSF dam began in 2011 by raising the dam 27 feet. The raising of the dam 52 feet is necessary to accommodate the planned production through the end of the current mine life. Increases in planned production with the addition of Phase 7 would have exceeded the capacity of the TSF without the 52-foot raise. The dam raise is a modified centerline construction as depicted in Figure 4.

Construction of the 52-foot dam raise requires three years. A 27-foot raise was completed during 2011, an 11-foot raise was completed in 2014, and the remaining 14 feet is scheduled for construction in 2015. The base working platform for the 25-foot raise was constructed during 2013. Once completed, the dam will be constructed to its design height of elevation 1,540 fmsl.

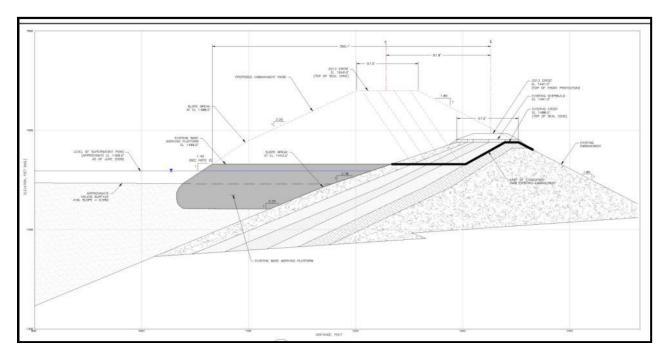


Figure 4: TSF Modified Centerline Design

#### **TSF INTERCEPTOR SYSTEM**

The TSF dam is designed for seepage to pass beneath the dam in fractured bedrock. The seepage is captured by the pump back system and the interceptor system. The pump-back system includes a pump-back sump together with a pumping and piping system designed to return the

seepage to the TSF. The interceptor system is a series of interceptor wells developed just downstream of the dam (Figure 5).

Most of the seepage passing beneath the dam feeds into a large lined sump where water from the pump-back system and interceptor system is pumped back to the decant pond at an average rate of approximately 1,843 gpm for 2014. Any seepage not captured directly by the pump-back system is captured by the interceptor wells. These wells form a hydraulic barrier preventing any



TSF Interceptor System Pump House

seepage from migrating further downstream and assuring the TSF operates as a zero discharge facility.

The interceptor well system continues to function as designed, maintaining a continuous cone of depression across the Fish Creek valley. The interceptor wells operate continuously with individual pumping rates ranging from approximately 7 gpm to 189 gpm (Table 4).

In 2014 Fort Knox contracted with a third party to:

- Review the existing interception system;
- Identify a location and install a test borehole for a new interceptor well;
- Collect data and review the hydrogeologic data; and
- Provide a design for a new interceptor well.

A new interceptor well, IW-13 was installed to a depth of 480 feet below ground surface (bgs). From the geophysics study results, the location for one additional well (IW-14) was identified, and its construction began in 2014 and will be completed in 2015.

A line of groundwater monitoring wells located immediately downstream of the interception system is monitored to insure that no process water is escaping the system and moving downstream.

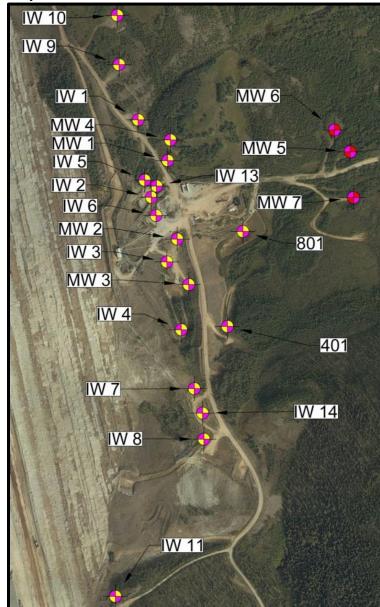


Figure 5: Interceptor System

Well IDApproximate Average Pumping Rate (gpm)		Well Depth (ft)
IW-1	62	320
IW-2	8	329
IW-3	27	310
IW-4	33	330
IW-5	88	380
IW-6	20	380
IW-7	16	197
IW-8	189	184
IW-11	18	296
IW-13	Did not pump in 2014	480
IW-14	Installation not completed	
MW-1	16	305
MW-3	7	296
Well 401	8	36
Toe Drain (501)	23	n/a
Total	515	

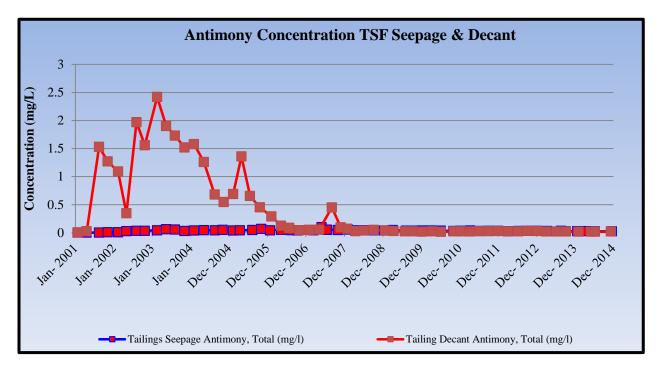
Table 3: TSF Interceptor System Pumping Rates

#### **TSF DECANT AND SEEPAGE METALS CONCENTRATIONS**

Antimony, arsenic, lead, and selenium concentrations continue to be analyzed in the TSF decant and seepage reclaim (Figures 6, 7, 8, and 9). These metal concentrations increased significantly as a result of introducing True North ore into the mill tailings beginning in 2001 and ending in 2004. Since 2004, the metals have trended down and remained low with the exception of lead. Lead nitrate was used in the milling process in 2008 and 2009 causing the lead concentrations in the decant water to elevate during this period.



Training Simulator



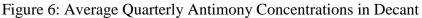
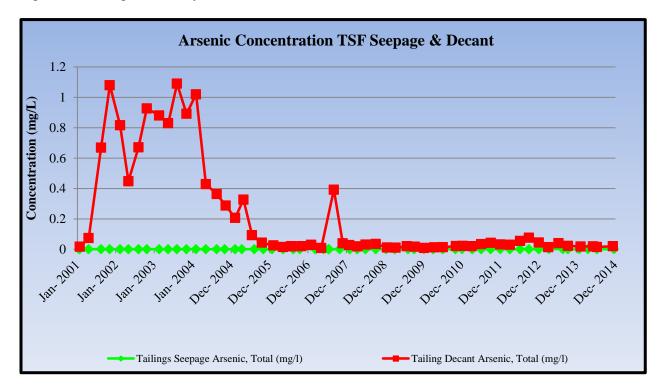


Figure 7: Average Quarterly Arsenic Concentrations in Decant



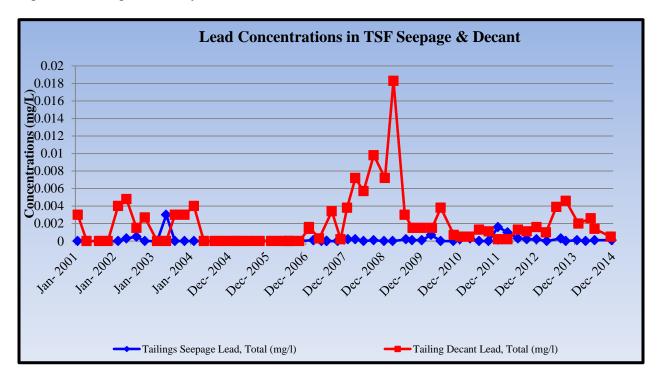
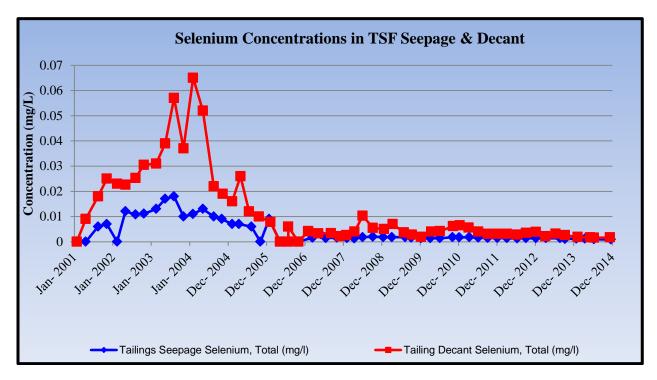


Figure 8: Average Quarterly Lead Concentrations in Decant

Figure 9: Average Quarterly Selenium Concentrations in Decant



### **10. FRESH WATER SUPPLY RESERVOIR and WETLANDS**

The Alaska Department of Fish and Game (ADF&G) continues with their work on the water supply reservoir (WSR) and associated wetlands. In the 2014 annual technical report prepared by ADF&G summarizing their work on the WSR and wetlands, certain conclusions were stated:



Fresh Water Reservoir

• Self-sustaining populations of Arctic grayling and burbot have been established in the WSR.

• The post-mining goal for the Arctic grayling population was set at 800 to 1,600 fish greater than 200 mm in length, and the spring 2013 population estimate for Arctic grayling was 6,675 fish greater than 200 mm in length, which is a slight decrease from the estimated 2012 population.

• A goal for burbot population was not previously set, but a small population of fish larger than 400mm exists.

• Beaver population management remains a critical component to Arctic grayling population within the developed wetlands and WSR appears to remain a critical component to the productive capacity of the wetland complex for Arctic grayling.

In September 2014, the 12-foot diameter culvert at the Solo Creek Causeway on the north side of the WSR required replacement. The culvert will be replaced with an approved 10-foot diameter culvert in 2015. Since September, water continues to flow through the damaged culvert. Access across the culvert has been limited until replacement has been completed.

### **11. RECLAMATION**

### FORT KNOX

In 2014, a total of 125 acres had restoration activities performed on them.

Figure 10: Reclaimed and Stabilized Areas



Reclamation planned in 2015 will include wetland and upland vegetation plot trials and continued stabilization of disturbed areas.

Growth media is stockpiled for use in final reclamation and closure. It is estimated that approximately 3.6 million cubic yards (cy) are required for final reclamation. Table 5 summarizes the volumes of growth media stockpiled that exist and are planned. A survey to determine the amount of growth media available will be done after the dam raise and heap leach construction has been completed. A portion of the growth media stockpiled and available borrow sources have been used because of its suitability for use as engineered seal and filter material for the TSF dam and engineered sub-base for the heap leach.

Table 4: Fort Knox Growth Media Stockpile and Borrow Quantities

Site	Volume (cy)
Yellow Pup GM Stockpile	1,276,798
Walter Creek GM Stockpile	2,141,590
Tailings South GM Stockpile	291,400
Tailings North GM Stockpile	3,186,400
Barnes Creek	425,029
Total	7,321,217

### TRUE NORTH MINE

Production from the True North Mine was terminated at the end of 2004. In 2009, the decision was made to abandon remaining reserves and to not continue with any additional mining at True North. FGMI submitted updated reclamation plans for True North in May 2012. The reclamation plan approval was issued by ADNR on July 26, 2012.

The True North annual inspection by ADNR performed on October 2, 2012 concluded all major earthwork and reclamation appeared to be complete, and FGMI could continue with post-closure monitoring and maintenance. A summary of reclamation work is shown in Table 6.

The reclamation plan prescribed the a seed mix of 50% Arctared Red Fescue, 20% Tundra Glaucous Bluegrass, 20% Gruening Alpine Bluegrass, and 10% Tufted Hairgrass. The seed application rate was approximately 9 lbs/acre. Fertilizer was applied at a rate of 300 lbs/acre with a Nitrogen (N) -Phosphorous (P) - Potassium (K) analysis of 20-20-10. The final application of fertilizer was broadcast on 113 acres in 2014. The vegetation, natural reinvasion and applied is successfully mitigating erosion a precursor to establishing post-mining land use.

The 2014 annual inspection included reviewing areas that have historically subsided, and some erosion issues due to the summer's record rainfall that occurred. These issues will be remediated during the 2015 construction season. The reoccurring subsidence cracks covering 4.6 acres of the Hindenburg waste rock dump have slowed down, and it was decided to not regrade them in 2014. FGMI will be reevaluating the next steps in 2015. During record rainfall, the storm water interceptor dips and water check dams functioned as designed.

The easement section of ADNR performed an onsite review of the designated RS2477 trail system that was reestablished during reclamation. There are very minor activities that will need to be completed prior to the States acceptance. FGMI will continue to work with ADNR in 2015 to finalize the trail system.

Area	Graded	Growth Media Placement	Scarified	Seeded and Fertilized
_	(acre)	(acre)	(acre)	(acre)
Dumps				
East Pit Dump	47.5	-	47.5	47.5
Zep and Hindenburg Dump	86.3	-	86.3	86.3
Spruce Creek				
(within Zep&Hind dump	10	-	10	10
footprint)				
Mid Shepard Dump	16.28	14.2	14.2	14.2
South Shepard Dump	68.6	-	68.6	68.6
North Shepard Dump	21.3	-	21.3	21.3
East Shepard Dump	4.2	4.2	4.2	8.9
Hindenburg Dump	8.5	-	8.5	8.5
North Central Dump	13.1	-	13.1	13.1
North Louis Dump	17.7	-	17.7	17.7
South Louis Dump	19.2	-	19.2	19.2
Lower AB Dump	13.6	13.6	13.6	13.6
Upper Louis Dump	16.4	-	16.4	16.4
Pits				
Hindenburg Pit	32.4	32.4	32.4	32.4
North Central Pit	12.3	12.3	12.3	12.3
Shepard Pit	38.5	38.5	38.5	38.5
Stockpads				
Upper A Stockpad	5.6	5.6	5.6	5.6
Upper B Stockpad	1.5	1.5	1.5	1.5
Roads				
Louis Road	<i>с</i> 7		<i>с</i> 7	<i>с л</i>
(with-in Louis Dump)	5.7	-	5.7	5.7
ANFO Pad / Explosives Road	16.4	16.4	16.4	16.4
Shop Pad	21.4	-	21.4	21.4
Growth Media				
Shop Pad Growth Media	2.3	-	2.3	2.3
East Pit Growth Media	3	-	3	3
Hindenburg Growth Media	2.2	-	2.2	2.2
Total	483.98	138.7	481.9	486.6

Table 5: Reclamation Work Completed at True North

# **12. FINANCIAL ASSURANCE**

As required by ADNR, ADEC and ACOE, the financial assurance amounts were revised and updated to reflect current plans for Fort Knox and True North. The new financial assurance amounts approved by the agencies in 2014 are \$96,164,867 for Fort Knox and \$3,066,526 for True North. The financial assurance bond was accepted by ADNR on April 7, 2014. Table 7 reflects the financial assurance for Fort Knox and True North.

 Table 6: Financial Assurance Amounts

Plan/Permit/Lease #	Amount (\$)	
Fort Knox Reclamation and Closure Plan	\$96,164,867	
True North Reclamation and Closure Plan	\$3,066,526	
Total	\$99,231,393	

### **13. MINE WATER USEAGE (WATER BALANCE)**

The Fort Knox water balance tracks water movement throughout the mine-site, including natural processes such as precipitation, evaporation, and seepage as well as mine operation water needs. The water balance that Fort Knox uses was built by a contractor using GoldSim software. GoldSim is a graphical simulation software that enables FGMI to construct complex models simulating the water balance both dynamically (using historic data) and probabilistically (using statistical simulations based on known factors).

The Fort Knox operational water balance focuses on mining and milling activities and is calibrated to recorded data on a regular basis so that site processes may be accurately represented and continually updated to reflect changing mine operations. In this way, confidence in predictive values increases the longer the model is operated and mine planning and the closure design may be continually optimized. Data used in calibration activities includes: tailing pond and fresh water reservoir water levels, seepage rates, precipitation and evaporation records, pumping schedules, production data, mill water flows, tailings deposition schedules, pool bathymetry, and information on mine process changes. The water balance is recalibrated whenever the model shows that the predicted water balance differed from actual measurements by more than four percent.

The water balance is continually updated with the most current information, including natural water inflows/outflows and water use throughout the mine-site. The dynamic nature of the water balance enables FGMI to actively manage water on site, with the goal of minimizing water use and maximizing efficiency.

# **14. EXPLORATION**

FGMI continues with an exploration program in the pit and in the surrounding area with the goal of identifying additional reserves that can further expand the existing pit or lead to development of another operation. Exploration in the vicinity of the Fort Knox mine in 2014 consisted of the following:

• Gil Project

In 2013, Fort Knox initialized baseline environmental studies at the Gil Project. These studies included:

- Meteorological monitoring;
- Surface water sampling and monitoring; and
- Groundwater sampling.

In 2014, environmental baseline studies were temporarily suspended at the Gil Project. The meteorological station was decommissioned (although various components remain onsite for future use).



Surface and ground water sampling has been ongoing at the Gil since the early 2000's. Originally, there were 6 surface water sites and 5 groundwater wells. In 2013 additional sampling locations were added. Currently, there are a total of 14 surface water sites, 5 ground water sites, and 3 piezometers. In 2014, the surface and ground water sampling was temporarily suspended.

In 2015, Gil Project work plans call for the following:

- Reinstalling the meteorological station equipment and resuming the meteorological data acquisition, and;
- Drilling, trenching, and reclamation at the Gil Project.
- Gilmore Project (formerly NOAA Project)

In 2014, the Bureau of Land Management (BLM) issued Land Use Permit Number FF096399 to Fort Knox that allows mineral assessment work on land immediately west

of the Fort Knox pit which is a part of the NOAA Withdrawal. The following activities occurred in 2014:

- A wetland delineation was completed on 200 acres directly west of the Fort Knox pit. The delineation determined that approximately 33 acres ae considered wetlands and 167 acres are uplands, and;
- Mineral assessment activities including drilling and reclamation.



In 2015, Gilmore Project anticipated activities

include mineral assessment activities of the permitted area including drilling and reclamation.

# **15. COMMUNITY AFFAIRS**

### FORT KNOX EXTERNAL STAKEHOLDER FEEDBACK PROCEDURE

Stakeholder feedback, be it positive or negative, is instrumental in providing Fort Knox with a platform upon which its operational and social performance can be regularly evaluated and modified to meet commitments to leading practice and continuance improvement. The objective of our procedure is to outline Fort Knox's commitment to demonstrate a transparent and trustworthy approach to issues management and to ensure that stakeholders can effectively communicate with Fort Knox.

External stakeholder feedback should be directed to the Community and Government Relations Manager (907-490-2218) who serves as the primary site point of contact, working closely with the General Manager and appropriate department managers to monitor.

#### COMMUNITY COMMITMENT



Fort Knox's commitment to the community in 2014 was demonstrated by its employees donating over 5,100 hours of recorded volunteer service to Fairbanks area organizations. These hours included Fort Knox sponsored events, activities supporting local organizations, and employees who volunteer their own personal time to area organizations.

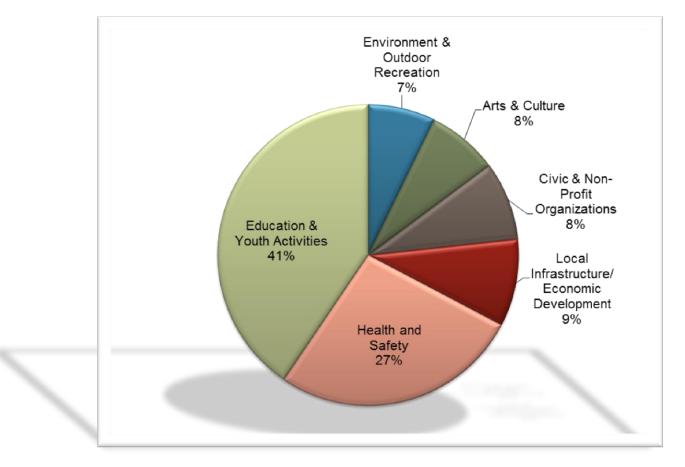




#### COMMUNITY INVESTMENT

Fort Knox showed further commitment to the Fairbanks community by donating to 70 area nonprofit organizations throughout 2014. This included a second \$1 million dollar commitment to the University of Alaska Fairbanks. Donations are summarized in Figure 12.

Figure 12: Fort Knox 2014 Donations



#### COMMUNITY ENGAGEMENT

Mine tours are an important part of our community engagement. In 2014 Fort Knox provided tours to 682 local students, and 300 visitors signed up for community tours of the mine. The community tours were conducted through a partnership with the Fairbanks Community Food Bank.







