2007 Sustainability Summary Pogo Operations



Letter from the General Manager

In 2007, Pogo Operations focused on achieving its design rates and applying the principles of continuous improvement. We are proud to run an Operation which factored energy efficient principles into the mine design. The total number of reportable spills experienced in 2007 was very similar to that achieved in 2006; work will continue to improve upon our performance. The Operation continued to work with the State on funding the Delta Mine Training Center to provide residents with employment opportunities; 13 graduates of the Center were hired during 2007. Key challenges associated with economic, environmental and social performance included:

- Reduce the number of spills occurring at the mine. Short-term goals are to reduce the reportable spills to the work pads in the mill and maintenance areas by 25%, and the long-term goal is zero spills being released beyond the work pad areas to the environment. We are committed to improving spill-control measures.
- Measurably improve safety performance, operate with no lost-time accidents (LTIs). Eleven LTIs occurred in 2007. Measures to reduce this number will be implemented in 2008; these will include improvements in training, procedures, additional support, hazard and risk assessments, and developing a safety culture at Pogo through personal commitments to safety. The Operation will continue to thoroughly investigate all incidents and feed the "lesson learned" back into the business.

- Approximately half a million dollars in community investment was made in 2007, with the majority of funding going to the city of Delta Junction. Funding was provided to improve upon infrastructural items, including: repair to the community sewage lagoon and the city's road grader, and installation of a new roof on the Delta Visitor Center.
- Increased local procurement of goods and services. To date, 33% of the goods and services are procured from local vendors.

Larry Davey General Manager

Overview of Operation/Facility

The Pogo Operation is a gold mine operated by Teck-Pogo, Inc. The mine is owned by Teck (40%), Sumitomo Metal Mining America Inc. (51%) and SC Minerals America Inc. (9%). At the end of 2007, approximately 240 people were employed by the Pogo Mine. The mine is located in eastern Alaska, 38 miles northeast of the city of Delta Junction. The gold from this mine is delivered into world markets and used for medicine, dentistry, industry, electronics, telecommunications, and jewelry.

Goals and Objectives

Goals were set for 2007 to improve safety, health, and environmental performance. The safety objective for 2007 was zero LTI's, however, at year's end, the 2007 LTI count was 11. The environmental objectives for 2007 included:

- Maintain National Pollutant Discharge Elimination System (NPDES) permit compliance for Weak-Acid Dissociable (WAD) cyanide. Mine personnel were able to maintain full compliance with the WAD cyanide levels, however, some optimization gaps still need to be addressed
- Install secondary containment for mill process tanks and piping. Secondary containment identified was placed in all identified areas, but an additional review indicates that more containment areas are needed
- 3. Complete post-construction reclamation as per the approved reclamation plan. A hazardous management system was completed and enhanced controls have been put into place
- Implement a hazardous material management system to maintain compliance with the Resource Conservation and Recovery Act; this was completed
- 5. Reduce the number of Alaska Department of Environmental Conservation reportable spills from the 2006 level of 76 reportable spills by 25%. These spills are not spills to the environment, but rather are spills to the work pad areas in the mill and maintenance areas on the mine site. The number of total reportable spills in 2007 was 81.

Objectives to improve safety performance in 2008 are based on the zero-harm safety and health policy. The objective is to reduce safety incidents on site to achieve a total recordable incident (TRI) frequency of less than 3.1, and a severity rating of less than 10.5. To achieve this objective, changes to safety teams and work site inspections have been implemented. Additional measures to reduce the rate of incidents in 2008 include improvements in training, updating and creating key operating procedures, additional organization support, hazard and risk assessment of tasks, developing a safety culture at Pogo based on a personal commitment to safety and investigating all safety and environmental incidents to identify root cause and opportunities for improvement.

Environmental objectives for 2008 will include the reduction of reportable spills to work pads in the mill and surface areas by 25% (from 81); enhancement of environmental compliance by implementation of an Environmental Management System (EMS) by the second quarter of 2009; and to maintain compliance with the regulated WAD levels in the permitted water discharge location.

To reduce the number of spills, the main spill contributors during 2007 will be identified and solutions implemented, all 2008 reportable spills will be investigated and recommended mitigative actions will be executed. To maintain compliance with regulated WAD cyanide values in the outfall, mill operating and control processes will be reviewed to identify measures to prevent WAD cyanide upsets in the circuit and consistent cyanide levels in the system will be maintained by implementing a cyanide management system.

Environmental Programs

The Pogo Operation achieved a 99.81% compliance rate with key water quality-related environmental performance objectives during 2007. Water quality in the Goodpaster River continues to demonstrate no adverse effects from Pogo's operation.

Seven permit and regulatory non-compliance events were reported; four of the events were associated with an operational upset at the sewage treatment plant. Discharge was halted and partially-treated sewage was hauled off-site while maintenance was performed.

Three other events were related to varying natural conditions at the outfall, during periods when the Pogo Mine was not discharging any effluent.

Throughout 2008, Pogo will continue to expand and enhance its EMS, with the goal of fully implementing an ISO 14001-compliant EMS in the second quarter of 2009; ISO Certification will be pursued in 2009.

Safety and Health

During the first quarter of 2007, the Operation implemented two major initiatives: an employee wellness program called Club Health was established, and hepatitis and flu vaccinations were provided for personnel electing to have the shots. Administration of the flu shots was part of the State of Alaska's mass-dispensing clinics program, conducted to determine how quickly the population could be inoculated in an emergency; 160 individuals were inoculated during the clinic, which should reduce the occurrences of flu in the camp. In the previous year, flu vaccines were distributed to 40 individuals on site.

During 2007, Pogo had 11 LTIs. Pogo had 67 Mine Safety and Health Administration citations, with 23 of those citations being Significant and Substantial, resulting in a total of US\$29,834 in penalties. Only two of the citations were rated high negligence; all citations have been terminated with the majority being terminated on the same day of issue.

Tailings Management

A total of 690,000 dry tonnes of tailings were placed in either the drystack tailings area or pumped into the mine stopes as paste backfill. Tailings management has improved over the past years with training being the prime focus – the main areas of training have been within Mill Operations (to produce a quality product) and in the construction of the Stack (to produce a stable and optimized structure).

Reclamation and Closure

No reclamation occurred in 2007. The reclamation plan is under review and the will be updated in 2008. Funds have been allocated in 2008 to mitigate identified reclamation priority projects.

Audits (Internal)

Internal Audits completed during the year included the following:

- Monthly Site audits of the various Departments were undertaken by the Occupational Safety and Health Committee; items identified were addressed
- A sanitary survey of the lower camp potable water plant conducted on December 20, 2007, in compliance with ADEC requirements, also had no major findings.

Energy Efficiency and GHG Emissions Management

Pogo Operations is a new facility with new equipment; consumption and energy efficiency were addressed prior to construction of the mine facilities. Work, however, will be initiated in 2008 to review energy (propane, electricity and diesel) usage and identify efficiency improvements.

Community Outreach, Engagement, Dialogue

Meetings to discuss project updates and the 2006 Environmental Monitoring Report were held with the Northern Alaska Environmental Center, the Goodpaster Property Owners, the Delta Chamber of Commerce, and the Pogo Advisory Group. No major issues or concerns were identified during the meetings. During 2008, additional interaction is planned with the Community of Delta Junction. The initial extent of this interaction will be focused on providing job information and status updates on Pogo. Additional opportunities will be identified in conjunction with the community.

Aboriginal Relations

Environmental personnel coordinated with the Alaska Department of Natural Resources (DNR), the U.S. Environmental Protection Agency, and the Army Corp of Engineers and invited five signatory tribes to conduct the annual meeting required by the Pogo Cultural Resources Programmatic Agreement. The Dot Lake Council participated in the annual meeting. The DNR presented findings related to the discovery of cultural resource material near mile 9.5 of the all-season road.

A total of 24 indigenous people were employed at the mine site during 2007, which represents 10% of the total work force.

Community Development/ Good Neighbour Practices

A total of \$510,000 in community funding was made during 2007 with the majority of funding going to the city of Delta Junction. The funding was provided to improve upon city infrastructure and was used to repair the community sewage lagoon, the city's road grader and to install a new roof on the Delta Visitor Center.

Qualified local job candidates are given preference for position vacancies. In addition, the company supports the training program at the Delta Mine Training Center to provide employment opportunities at Pogo Operations and hires graduates of the program.

The use of local vendors and service providers is preferred for the procurement of goods and services; in 2007, 33% of the Operation's goods and services were procured locally.

Emergency Preparedness and Risk Management

A fire team and mine rescue team have been established and meet weekly to train for emergency responses. The mine rescue team will begin participating in competitions in 2008.

Human Resources

The Operations implemented a summer intern program for eight college students and four college-age children of mine employees. At total of 13 graduates from the Delta Mine Training Center course were hired on in a full-time capacity.

Pogo has a relatively high employee turnover rate, which impacts both productivity and continuity. Work is ongoing to reduce the turnover by improving employee working and living conditions and providing competitive remuneration. Some success is being achieved on these fronts and the turnover rate has started to drop.

		2007	2006	2005
Health & Safety Statistics				
Total Recordable Incident Frequency		8.32	3.06	3.83
Fatalities	-	0	0	0
Lost Time Incidents	-	11	3	4
LTI Frequency	Ø	2.77	0.71	0.64
LTI Severity	Ø	94.55	33.92	28.2
Permit Compliance				
Number of Excursions	-	7	25	2
% Compliance Water	Ø	99.81%		
% Compliance Air		n/a		
Reportable Spills				
Number	-	81	76	66
Volume (L)	-	78,208		
Weight (kg)	-	0.5	•	
Metals Released in Effluent (tonnes)				
Cadmium, Lead, Zinc		< 0.001		
Average Concentrations in Effluent (mg/L)				
Cadmium, Lead, Zinc		< 0.001		
Energy Use				
Total Energy Use (GJ)	-	616,520	514,084	312,622
Energy Intensity in Product (GJ/oz)	-	2.4	4.5	no production
Carbon Energy Intensity in Product (GJ/oz)	Ø	1.3		
GHG Emissions				
CO2 equivalents (kt) (Direct)	-	27	24	20
CO2 equivalents (kt) (Indirect) (1)		48		
CO2 equivalents (kt) (Total)		75		
Carbon Intensity in Product (t/oz) (Direct) (2)	-	0.10	0.21	n/a
Carbon Intensity in Product (t/oz) (Total)		0.29	0.47	
Production (oz)				
Gold		259,820	113,364	0
Recycling				
Total solid material (tonnes)		20	13	0
Total liquid materials (m³)	-	332	129	0
Total items counted (count)	-	100	195	0

		2007	2006	2005
Managed Wastes				
Total Waste Rock ('000 tonnes)	-	190	187	
Total tailings dry ('000 tonnes)	-	690	287	
Total solid non-haz. material to landfill (tonnes)		n/a	0	
Total solid non-haz./haz. material incinerated or disposed (tonnes)		5		
Water Conservation				
Total groundwater withdrawal (m³/yr)	-	155,185	27,968	
Total surface water withdrawal (m³/yr)	-	230,507	165,510	
Total volume of water recycled/reused (m³/yr)	-	5,968,188	n/a	
Total percentage water recycled/reused %	Ø	1547%	n/a	
Reclamation				
New reclamation for the year (ha)	-	0	0	0
Reclaimed to date (ha)	-	0	0	0
Land to be reclaimed (ha)		180	180	180
Trees/shrubs planted (count)	-	0	0	0

n/a = not available

(1)Greenhouse gas (GHG) CO2e emissions for electricity use for Pogo is calculated using the US Department of Energy (DOE) GHG emissions factor. (2)Pogo 2006 Carbon Intensity in Product (t/oz) (Direct) was improperly reported in 2006; the number has been revised for 2007 report. Deloitte & Touche LLP reviewed selected environmental, health and safety data in the 2007 Sustainability Report. Their Independent Reviewers' Report is available on page 54. Only performance data with the following symbol 💞 was independently reviewed by Deloitte & Touche LLP.



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