



2014 Pogo Update

Mining Done Right



Northern lights over Pogo – photo taken by Dave Brown, Pogo employee

Safety Review

Successful Year

- Zero LTI: +1M Work hours at the end of 2014
- Medical Treatments: Goal was 6 or fewer. Pogo experienced 4



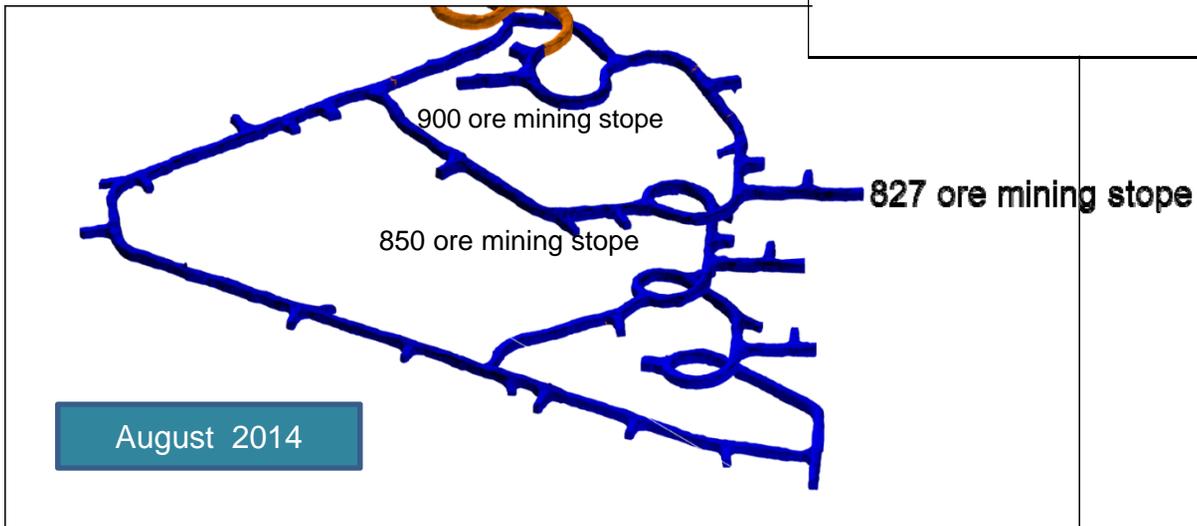
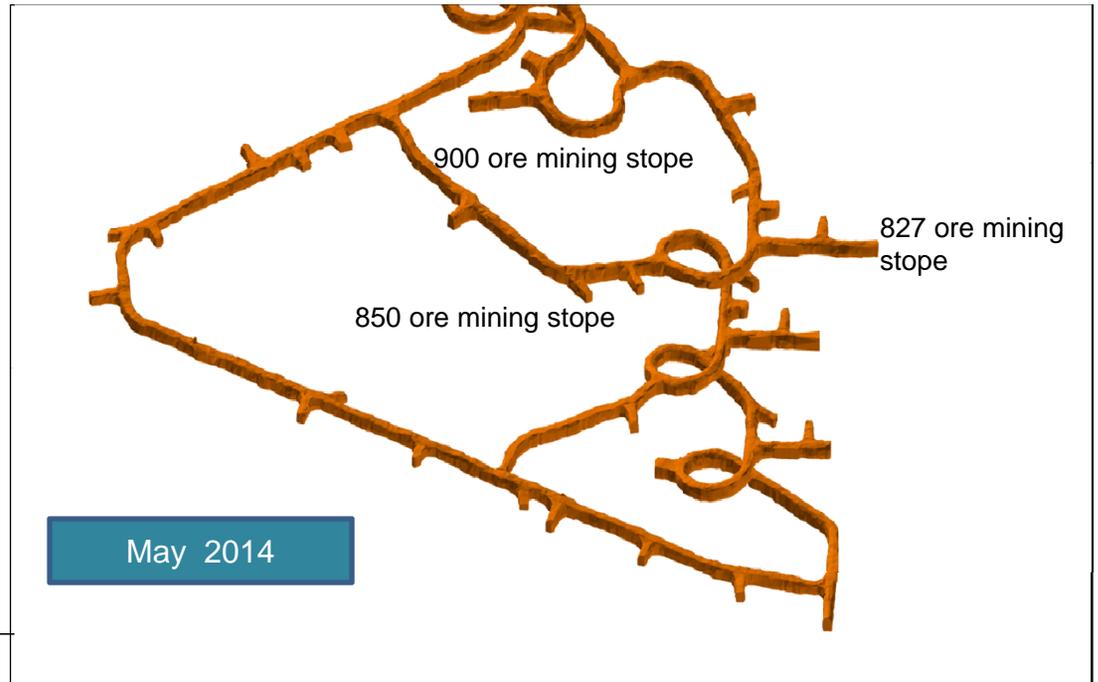
Production

- Mined: 972,406
- Milled: 967,230 tons
- Produced: 342,147 Oz
- Operating Cost: \$211.5M
- Capital: \$50M, \$17M Exploration



Pogo

- Wet Summer
 - Impacts:
 - Flooding Lower part of the mine!



Pogo Construction

Water Treatment Plant 3

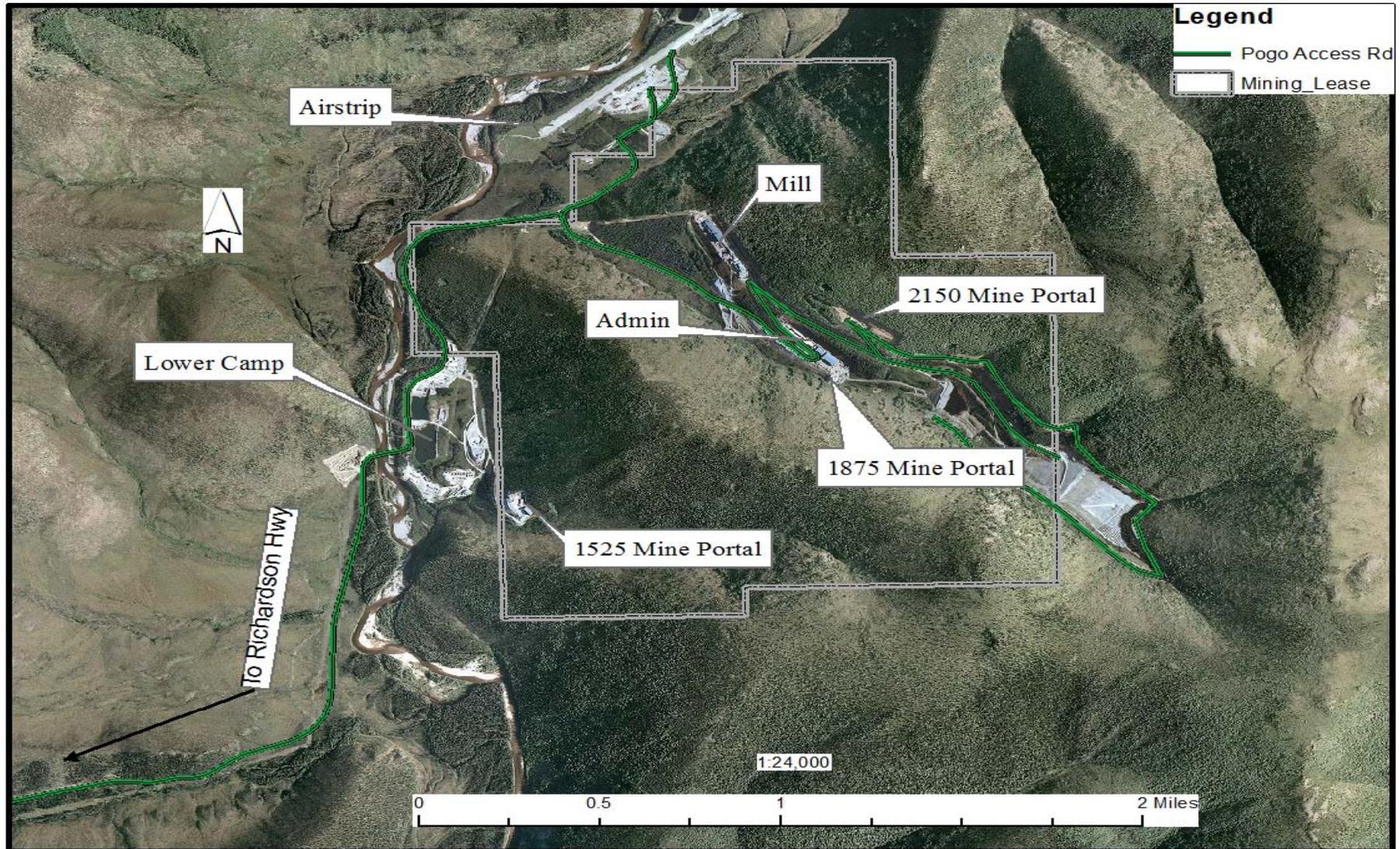


Pogo East Deep

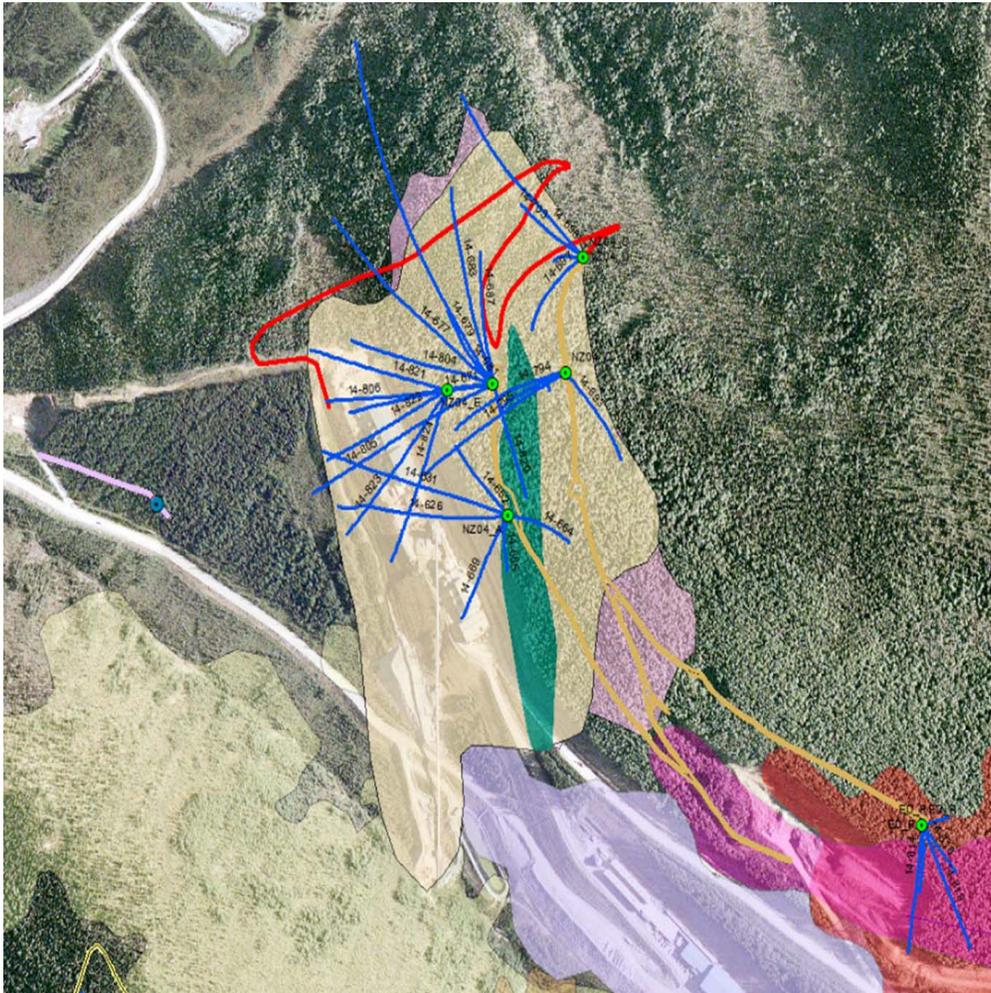


Pogo Exploration

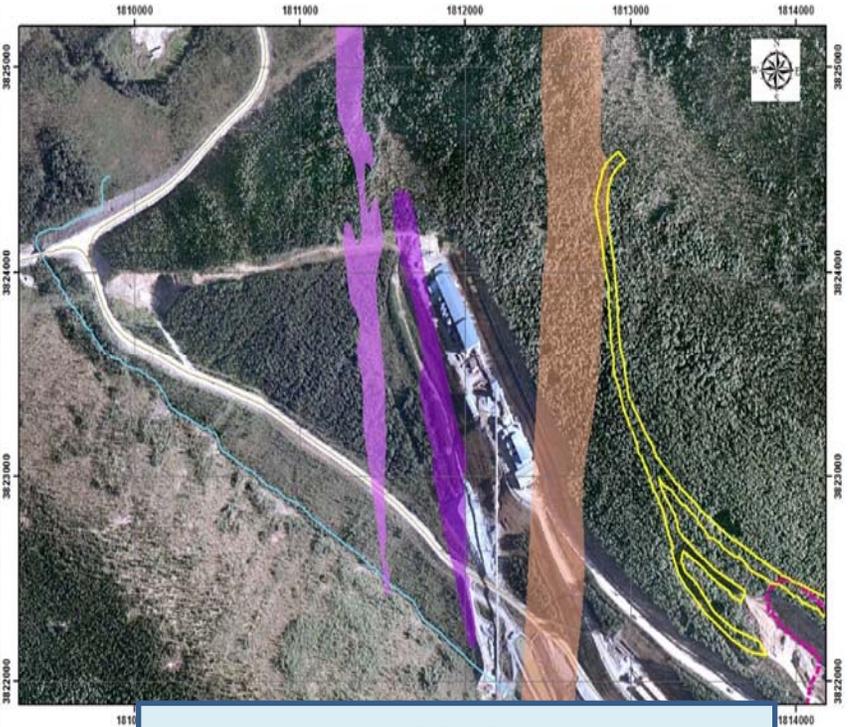
Figure 2 Access to Pogo Mine Lease and Claim Block via All-Season Pogo Rd.



Pogo Exploration



\$17M Capital in 2014



2013

2015



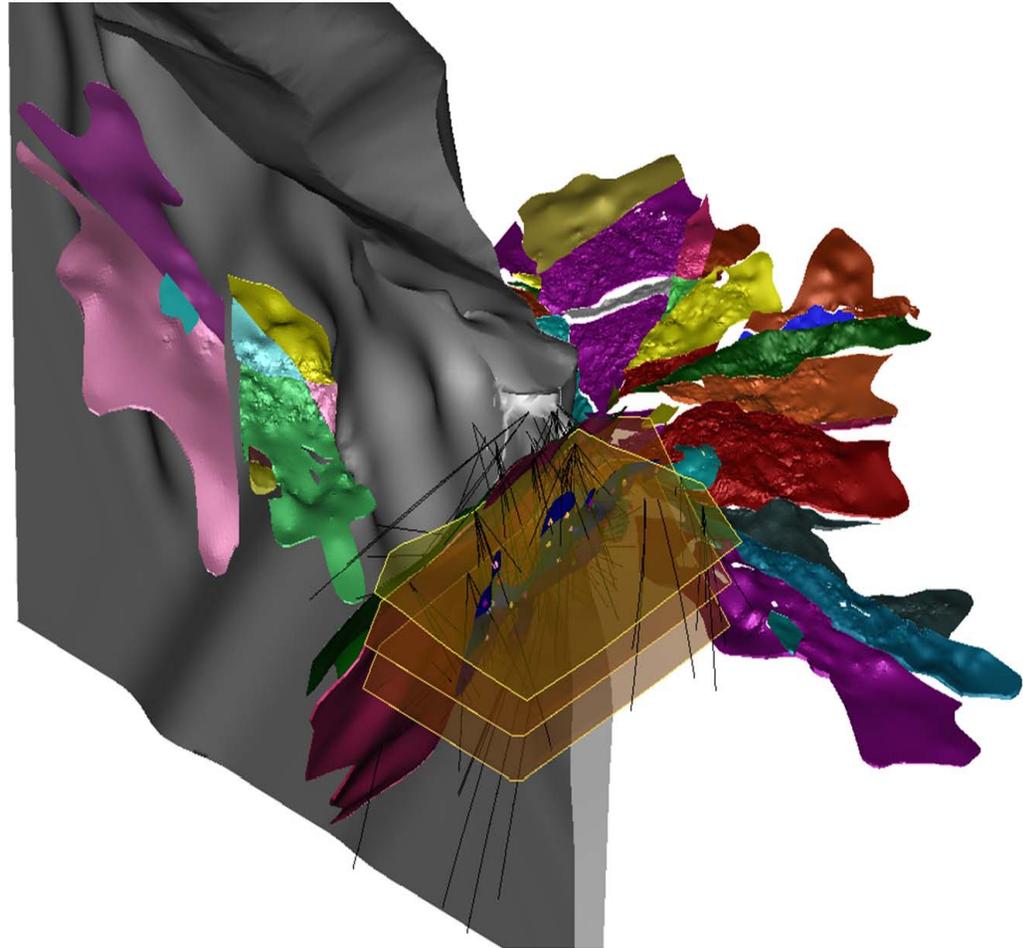
Celebrate!

- SMM Pogo--- 3 Million Ounce
 - 3rd Quarter in 2015!



Pogo Exploration

- SMM Pogo exploration for 2015 looks to follow up and expand on the 2014 successes through detailed surface and underground drilling campaign.
- Approximately \$15 Million has been budgeted for the 2015 exploration program.
- A total of 168,000 feet of drilling is planned



Last Mine Standing



POGO MINE



SUMITOMO METAL MINING POGO LLC



MINING DONE RIGHT

Annual Activity and Monitoring Report Meeting

March 27, 2015

Fairbanks

Discussion Summary



Fireweed

*Epilobium
angustifolium*

- Monitoring Results
- Compliance Discussion
- Permitting Update
- Significant Achievements
- Other Activities



Yellow Warbler
Cardellina pusilla



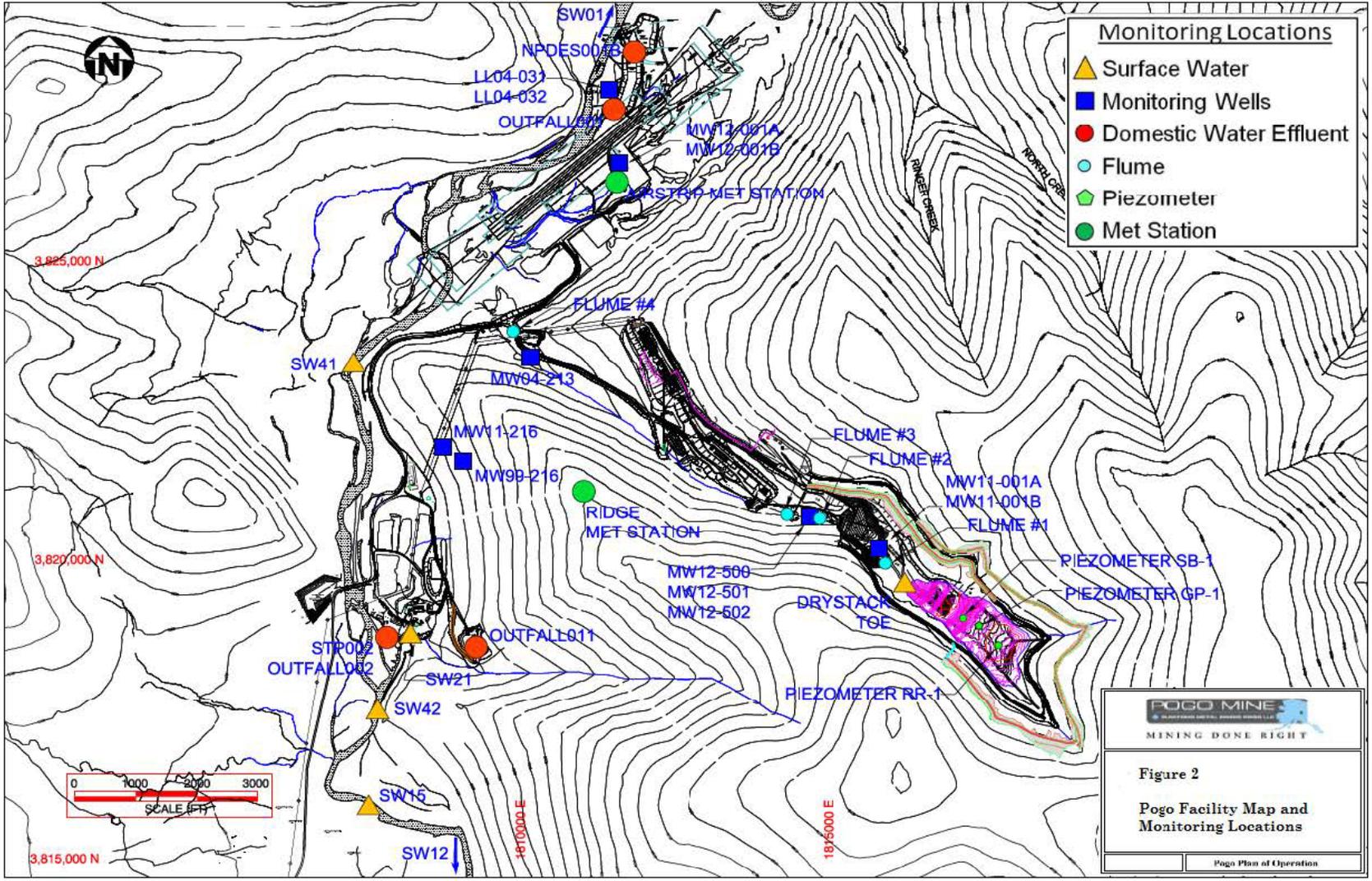
Harebell
Campanula lasiocarpa



Pink Plumes
Polygonum bistorta

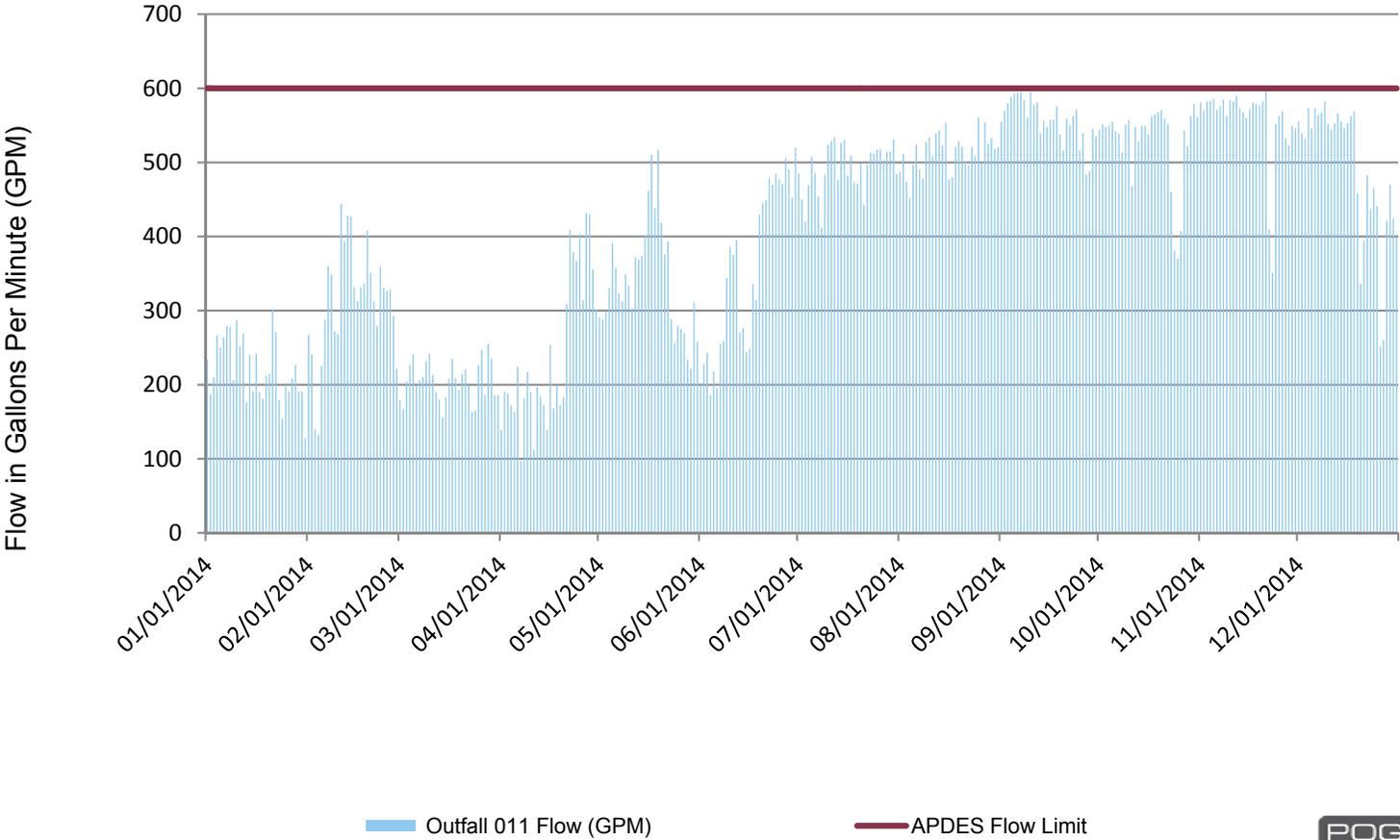
Monitoring Results





211.1 Million Gallons Treated and Discharged

2014 Outfall 011 Flow (GPM)



Goodpaster River Monitoring

- Four surface water stations are monitored on the Goodpaster River

2014 results were all within permit limits



Whole Effluent Toxicity Testing (WET)

Annual Whole Effluent Toxicity Testing took place in June. Water being discharged into the Goodpaster River was sent to the lab for biological assay.



Ceriodaphnia dubia

Water fleas and Fat Head minnows were grown in different concentrations of effluent to see how it affected growth and death rates.

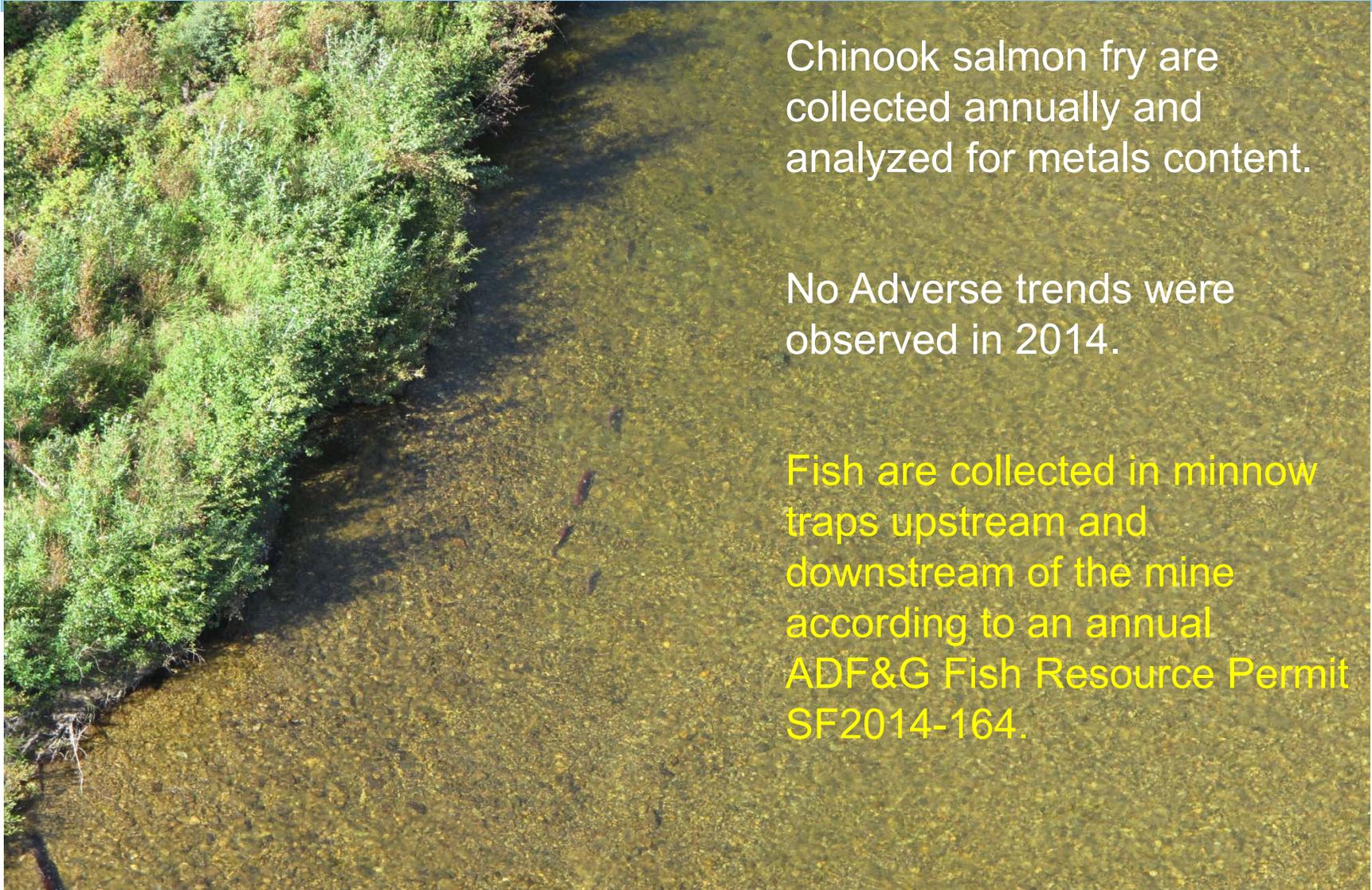
Test is duplicated, two labs are used every year. This year due to some lab problems, one of the tests was re-run.

All final results were within permit limits.



Pimephales promelas

Fish Tissue Sampling in Late September 2014



Chinook salmon fry are collected annually and analyzed for metals content.

No Adverse trends were observed in 2014.

Fish are collected in minnow traps upstream and downstream of the mine according to an annual ADF&G Fish Resource Permit SF2014-164.

Fish Tissue Sampling in Late September 2014

- Salmon Fry are also measured and genetic samples are taken for the Fish & Game Department
- Extra salmon fry are released back into the river.



To Better Assess Long Term Trends, Pogo Also Collected Slimy Sculpin.



1 upstream and 6 downstream in 2014.





Cloudberry
Rubus
chamaemorus



Arctic Poppy
Papaver
lapponicum

Compliance Discussion



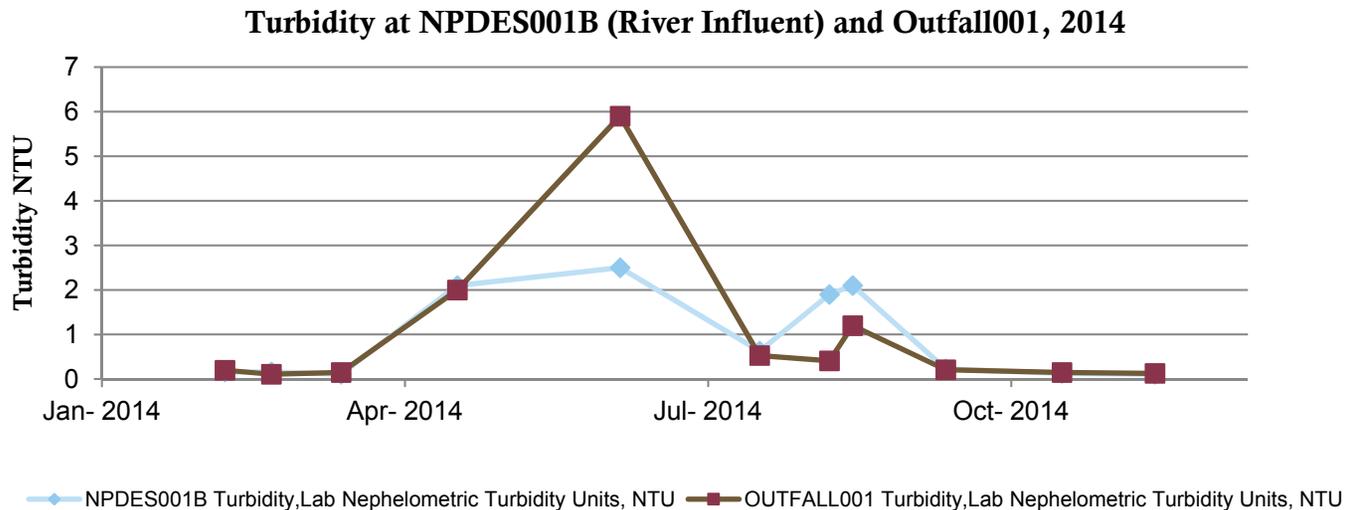
Northwest Territory Sedge
Carex utriculata

2014 June Record Flood Event



Outfall 001 Monitoring – High Turbidity

Goodpaster River flooded June 18. On June 19, discharge was ceased when approaching the Maximum Daily Limit for flow at Outfall 001 until permission was received from ADEC to continue discharge during flood conditions.



Heavy rainfall and subsequent flooding, resulted in high turbidity during June, however, it was not reported as an exceedance as it was a direct result of the high water event, and not mine water discharge.

Overall Environmental Compliance

Compliance Order by Consent (COBC) was issued in 2012

- Under ADEC 2012 Compliance Order By Consent all corrective action items were completed with the exception of Mine Water Treatment Plant # 3



Overall Environmental Compliance

- ADEC granted an extension for completion of MWTP#3 in 2015.



Transmission Line Right-of Way



Kinnikinnick
Arctostaphylos
uva-ursi

- Clearing under transmission lines for fire prevention on the Access Road, caused some unintended, unpermitted, ground disturbance.
 1. Erosion control measures were put in place to mitigate ground disturbance.



Transmission Line Right-of-Way



Pasque Flower
Pulsatilla patens

- In 2015 additional fire-prevention clearing will occur:
 1. Environmentally Sensitive areas will be flagged to delineate boundaries.
 2. Equipment operators will be thoroughly briefed on the allowed clearing activities along the transmission line.



Spills in 2014

10 Spills from Pogo Employees.

3 Spills from Contractors on site.

85% of spills were \leq 5 gallons petroleum products released from mobile equipment.

- 13 Reportable Spills in 2014



Haul Truck under Blue Tube

View from the top of the new CIP Tank

Environmental Audits and Corrective Actions

Three site inspections in 2014:

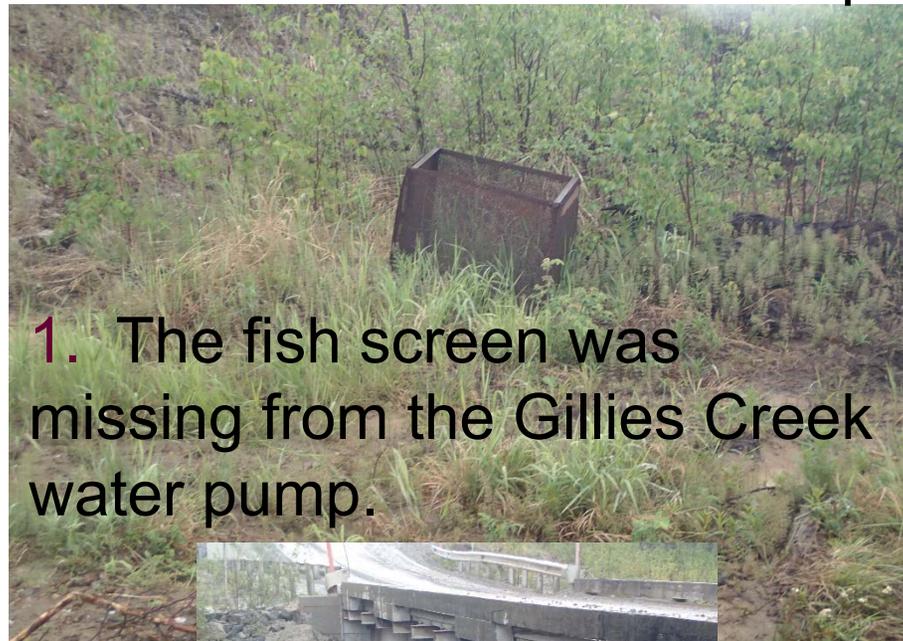
1. June 3, ADNR, ADEC and ADF&G spring inspection.
2. July 8, ADEC's Division of Spill Prevention and Response Prevention and Emergency Response Program inspected contractor spill sites and other areas of the Pogo Mine site.



3. July 14, the EPA conducted an unannounced RCRA (hazardous waste) inspection.

Environmental Audits and Corrective Actions

June 3, ADNR, ADEC and ADFG inspection resulted in two Corrective Actions that were quickly addressed:



1. The fish screen was missing from the Gillies Creek water pump.



2. Some debris (2X4s) around the Shaw Creek Bridge.

Environmental Audits and Corrective Actions

July 8, ADEC-Spill Prevention and Response inspected contractor spill sites and surface areas of Pogo Mine site.



No Corrective Actions were noted & DEC inspectors complimented Pogo on our commitment to good housekeeping and protecting the environment.



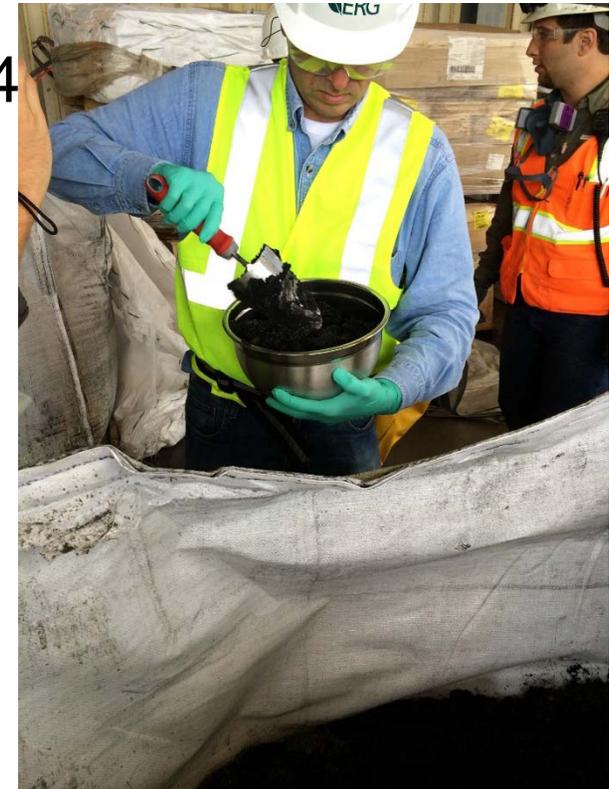
Environmental Audits and Corrective Actions

July 14 the EPA conducted an unannounced RCRA (hazardous waste) inspection.



EPA collected 4 samples; ore, carbon kiln, furnace scrubbers and carbon fines.

Results of this inspection are still pending.





Marsh Violet
Viola epipsela



Tufted Fleabane
Erigeron caespitosus

Permitting Update



Studies and Models Completed in 2014

- Drystack Closure Study
- Underground Closure Study
- Groundwater Hydrology Model
- Pogo Standardized Reclamation Cost Evaluation (SRCE) Model (Draft)



Informally reviewed by ADEC and ADNR, formal comments will occur during next permit renewal cycle.

EPA's Commercial and Industrial Solid Waste Incinerator (CISWI) Rule (40 CFR Part 60, Subpart CCCC). CISWI Rule Managing Waste with our Remote Incinerator



- The new EPA rule requires additional monitoring, with operational limits determined by the annual stack test.
- The CISWI Rule increases reporting requirements.

CISWI Rule - Managing Waste with our Remote Incinerator



- Operational Limits for Scrubber:
 - Total weight of trash that can be burned (a rolling 3-hour average),
 - pH above 8.5, to be recorded every 15 minutes while operating (rolling 1-hour average).
 - Water inflow above 10 gallons per hour (gph) recorded every 15 minutes while operating (rolling 1-hour average).
 - Pressure-drop across filter less than 2, to be recorded every 15 minutes while operating (rolling 1-hour average).
 - All deviations require reporting.

Incinerator Scrubber



- Scrubber discharge water has been monitored weekly since it was put into operation.
- Scrubber water discharge options still under consideration:
 - Sewage Treatment Plant
 - or
 - Mine Water Treatment Plant #2

Incinerator Scrubber



- Scrubber discharge water is allowed to cool through a series of four tanks before exiting through the sump.

2015 Annual Incinerator Performance Test



The annual stack test will be in done September or October of 2015.



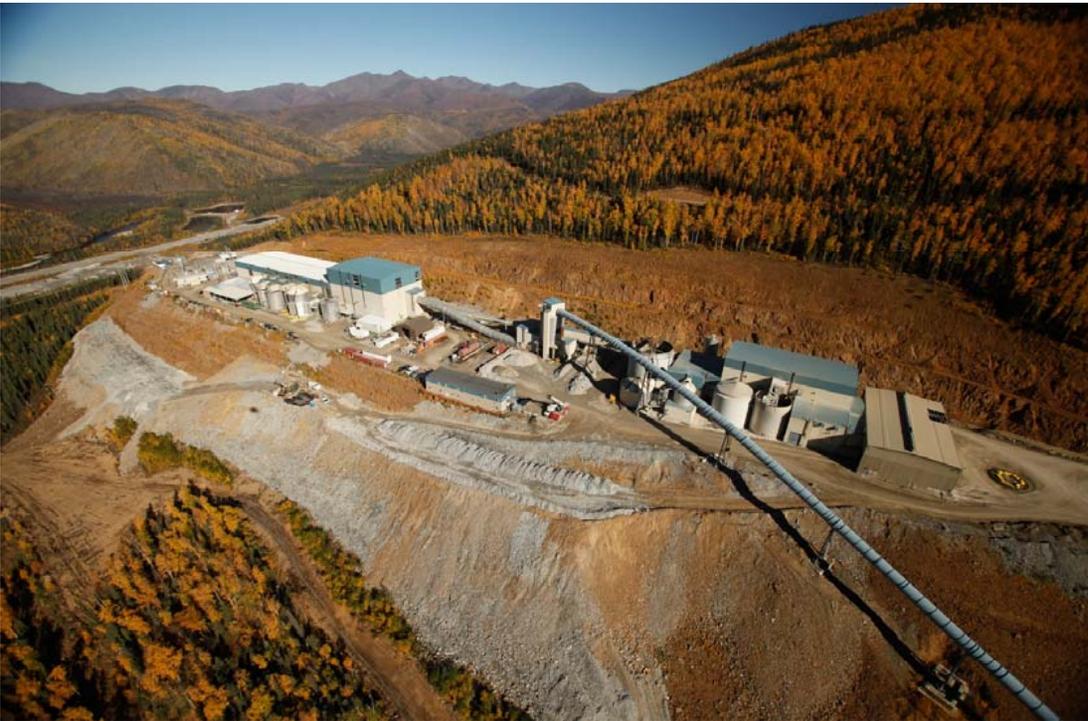
The results of the test determine the limits the scrubber must meet during for the next year.





Woolly Butterwort
Pinguicula villosa

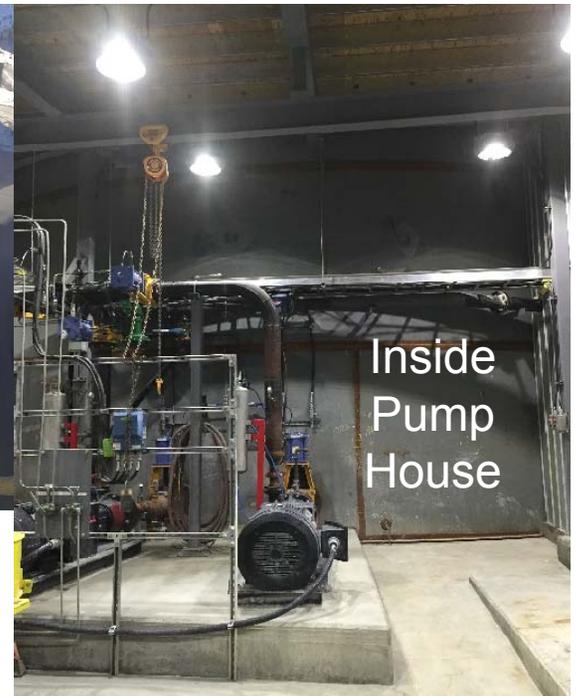
Significant Achievements



Carbon In Pulp (CIP) Tank 2014 Construction



CIP Tank – Commissioned March 10, 2015



- 778,400 gallons.
- Tank-in-tank design for secondary containment.
- Used as a temporary Filter Feed Tank prior to using as CIP Stock Tank, allowing Pogo to empty, clean, inspect, and repair original Filter Feed Tank.



Other Activities



Hairyleaf Rush
Juncus supiniformis





Sandbar Willow *Salix interior*



Chiming Bells *Mertensia paniculata*

Reclamation Trial Plots

“Revegetation Test Trial Program for Reclamation at Pogo Mine, May 2012”

Felt-leaf Willow
Salix lasxensis



- Test plots were established for alluvial shrubs with native grass species and Alder and Felt Leaf Willow seeds.
- Willow cuttings to be collected and planted Spring 2015.

Reclamation Trial Plots



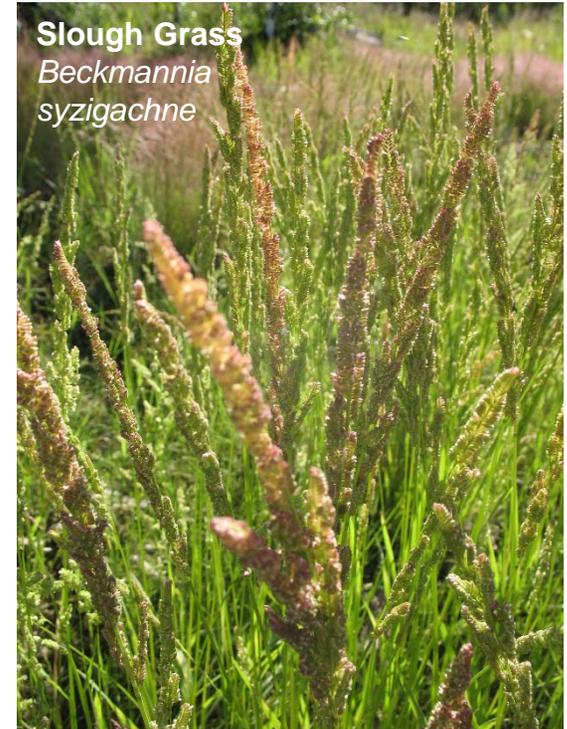
Spring Beauty
Claytonia
sarmentosa



Merckia
Arenaria
physodes



- Test plots were established for wetland plants with native grass species. Iris, and sedge seeds collected locally.
- Every plot was labeled and photographed.



Slough Grass
Beckmannia
syzigachne

Reclamation Trial Plots



Alder
Alnus
crispa



**Reflexed
Saxifrage**
Saxifraga
reflexa



Aspen
Populus
tremuloides

- Test plots were established for Broadleaf Forest plants with native grass species, birch, alder, aspen and white spruce collected locally.
- These will be seeded in the spring.



Reclamation Trial Plots



Monkshood
Aconitum
delpinifolium



Wind Flower
Anemone
parviflora



- In 2015 more local seed will be collected and alpine meadow plots on, or near, the drystack will be developed.



Eskimo Potato
Hedysarum alpinum



Pasque Flower
Pulsatilla patens



River Beauty
Epilobium latifolium

ISO 14001 Certification Achieved



Wild Rose
Rosa acicularis



ISO 14001 Certification

Pogo's achievement of this certification enhances our level of commitment to maintain excellence and hold true to our Environment, Health and Safety Policy.

Surveillance Audit coming in July, 2015:

- Continuing Improvement
- Continuing Environmental Stewardship



Met Station Data Collection Continues

- On September 30, 2014 Pogo completed 3 years of air quality data collection.
- Data had a >90% recovery rate.
- Data will be used to support future dispersion modelling.



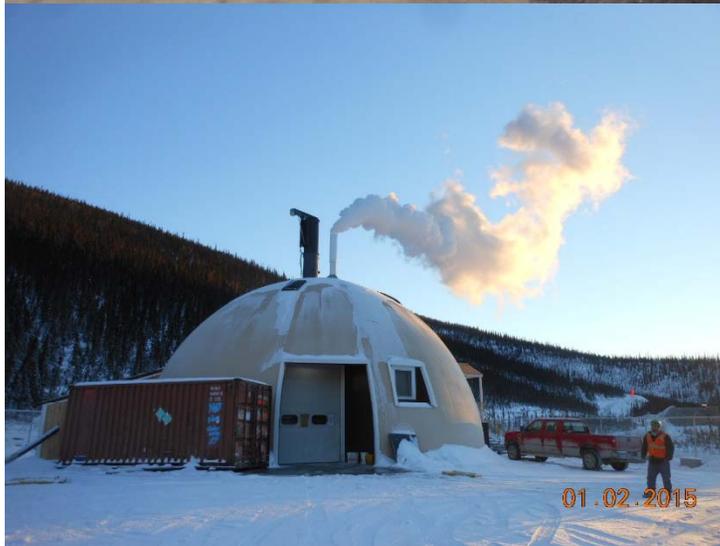
Future Permit Activities



**Death
Camass**
*Zygadenus
elegans*



Earthsmoke
*Corydalis
sepervirens*



- Material Sites Applications for extracting material (gravel) from two existing sites along the Pogo Access Road.
- Receive Approval for modification of the RTP Dam Head Tank #2
- Receive final Title V Air Quality Permit to include incinerator and the 2150 portal.
- APDES Permit Renewal

Pogo's 2015 Environmental Goals

- Zero Notices of Violation
- Fewer than 6 Reportable Spills for Pogo
- Fewer than 3 Reportable Spills for Contractors
- Maintain ISO 14001 Certification



Labrador Tea
Rhododendron groenlandicum



Lapland Rosebay
Rhododendron lapponicum



2015 Pogo Environmental Department Manager



Keri DePalma

Environmental Manager

Goodpaster River in winter,
Stream Gauging

2015 Pogo Environmental Department

Stacy Staley, Penny Labahn, Ray Zimmer, Jim Ward, Leonard Hanson, Ben Farnham, Nathan Stewart





Questions?





Frigid Shooting Star
Dodecatheon frigidum



Hairy Scorpion Weed
Phacelia mollis
(both photos)

