Safety

- 9 Lost Time Accidents (LTA) in 2012
- Daily workplace & pre-shift inspections utilizing the 5 point safety card system
- Planned General Inspections (PGI's)
- Expanded & Increased level of Training Program (Site Trainer/On-site 40-hour MSHA training)
- Task Observations
- Supervisor Training

Avalanche Control Program

Warning and Avoidance:
We use snowpack and weather observations as well as weather forecasts to generate daily forecast and travel restrictions.

Rescue Program
- Mine personnel are issued and wear Recco belts
- On going rescue training
- Through Monitoring and Mitigation, no issues resulted from large snowfall.

Stage 2 - Tailings Treatment Facility

- Construction Activities began in June 2012 & completed in October 2012
- Increase height from 690’ to 715’

Stage 2 - Tailings Treatment Facility

- East Abutment Foundation Excavation & Cleaning Prep Work
- Lean Concrete Placement on Foundation
Stage 2 - Tailings Treatment Facility

Zone A Material Placement

Stage 2 - Tailings Treatment Facility

HDPE Liner Installation

Stage 2 - Tailings Treatment Facility

Interim Spillway Construction

Stage 2 - Tailings Treatment Facility

• Geotextile Placement over HDPE liner
  • Shot-creting of Plunge Pool

Graphitic Phyllite Temporary Storage Cell Construction

• New containment cell for storage of Graphitic Phyllite (GP) [Capacity of 8000 cy]
• GP from the construction of the stage 2 interim emergency spillway
• Water collected in cell and conveyed to sump and transported to temporary package water treatment plant at TTF for treatment
• Under Liner sealed to Top Liner
• Temporary Storage until 2014 at which time it will be encapsulated in paste tailings in an underground stope

Administration Building Construction

Offices, Medic, Meeting & Training Rooms
UG Triple Sump
Capture and Remove Sediment Prior to Exiting UG mine; Ability to Remove Sediment without affecting mine water quality

Tailings Treatment Facility
- Upgrade Reclalm Barge and Access
- Re-locate collection sump at Temporary Package Water Treatment Plant

Surface Exploration Program
Plan: 20 drill sites (15,000 ft) (12 sites on patented land, 8 on FS)
Completed: 6 drill holes on patented land were drilled due to difficulties with obtaining a diamond core drill

Paste Plant Operation
- Commissioned in May 2012
- Approximately 102,000 tons of tailings conveyed to paste plant in 2012
- Correlates to approximately 27% of tailings produced
- Difficulties with site-gen sets in 4th quarter prevented use of plant operation

Ore Reserves
End of Year 2012 Coeur Alaska Ore Reserves and Resource

Proven and probable reserves:
- 4.67 million tons @ 0.22 opt – 1.02 million ounces
- Includes 10% external dilution

Measured and indicated mineral resource exclusive of reserves:
- 2.61 million tons @ 0.20 opt – 0.53 million ounces
- Undiluted, no ore losses

Mine Planning
Coeur Alaska Life of Mine Plan, 2013
- Based on the resource model developed by third-party geologists with oversight from Coeur geologists.
- Mine plan developed by Coeur Alaska engineers.
- Mining method is primarily transverse longhole stoping with paste backfill.
- Production profile is 1560 tpd through 2022.
Mine Activities in 2012

- Total of 137,619 feet of underground core drilling was completed between January and December of 2012.
- The development drilling was comprised of 77,730 feet.
  - This program was assessed in the up-ramp and down-ramp.
- The exploration drill program included 59,889 feet.

Mill Operations in 2012

**2012 End-of-Year Numbers:**
- 394,804 tons milled
- 0.218 opt Ore Grade (weighted avg.)
- 95.3% average Recovery
- 82,105 ounces of gold produced

Mill Operations

**2013 Targets**
- Milled tons: ~550,000 tpy
- Reserve Grade (diluted): 0.20 opt
- Gold Recovery: 94% to 96%
- Concentrate Produced: up to 48 tpd
- Concentrate Grade: 7 to 10 opt

Analytical Laboratory Facilities

Conduct Assays for Underground Mine, Mill Facility, & Underground & Surface Exploration Programs

Power Generation

- One new gen-set commissioned in 2012
- Caterpillar 1.8 MW gen-set
- Existing gen-sets sent off-site for rebuild starting in 4th quarter of 2012
- All five gen-sets are planned to be re-build by 3rd quarter of 2013
Power Generation

- One additional 1.75Mw Detroit Diesel gen-set setup in 2012
- Gen-set commissioned in 2013
- Total of 7 gen-sets
- Five gen-sets operating with 2 back-up to provide for required maintenance and contingency for unexpected events

2012 MILL PROJECTS

- Construction of Intermediate Tailings Holding Tank
- Provide Operational Flexibility to convey tailings to Paste Plant or Tailings Treatment Facility

Treatment Plant Performance

Operations
- Jim Gubler - Process Technical Superintendent
- Tod Thurber - Supervisor
- Rick Saulnier – Sr. Operator
- Larry Akaran – Operator
- Brent McEwen – Operator
- John Ashenfelter – Operator
- Curt Jones – Sr. Operator
- Gary Sharrett – Sr. Operator
- Peter McCr issue
- Daniel Edershien – Operator/Sump Maintenance

Tailings Treatment Facility Water Treatment Plant Performance

- Twelve Permit Threshold Non-Conformances in 2012
  - Three Iron & Two Toxicity non-conformances in January & One Iron in March as a result of an over-dose of coagulant
  - Two Aluminum non-conformances (March & May) : (Aluminum concentrations very high in background. Adjusted pH for improved removal efficiency)
  - Four Aluminum Non-Conformances in December as result of new coagulant trials. Bench scale testing indicated improved performance for algae removal.

Comet Mine Water Treatment Plant Performance

- Two Permit Threshold Non-Conformances in 2012
  - One Copper Non-Conformance in March (Upset of Cement Rock Fill (CRF) Operations)
  - One Ammonia Non-Conformance in October: (Increased use of ANFO due to mechanical difficulties with the emulsion distribution system)

Plant Performance

- Potable Water System operated without a Water Quality Non-Conformance in 2012
- Sewer Treatment Plant had six BOD & one Fecal Coliform Permit Threshold Non-Conformances in 2012 as result of algae growth in dosing tank. (Smaller Dosing Tank & UV system placed in tank to correct this issue)
Plant Performance

Corrective Actions:

1.) Established Water Treatment Task Force
2.) Working Group reviewed historical Root Cause Analysis for Permit Non-Conformances to ensure corrective actions were adequate
3.) Review of existing internal plant sampling process
4.) Conducted a detailed risk assessment to identify and mitigate potential issues
5.) Process Technical Supt. was added to water treatment plant organization to focus on projects & follow-up actions identified by the task force.

Compliance/Permitting

- Revised Reclamation Plan submitted on 4-2-10; revised on 3-31-11 & 11/19/12; responses 12-20-11 & 11/29/12
- Approval on 5/3/13
- Building Permits – Admin. Building, Comet Power-House, Gen#7 cement pad, Switch-Gear Unit

Environmental Management System

Environmental Management Plan:

- Comprehensive Plan developed that describes site environmental compliance
- Provided to site managers and department heads
  - Lists of Permits and Plans
  - Site Specific Guidelines
  - Waste Management
  - Hazardous Waste & Materials Management
  - Monitoring Requirements
  - Water Quality Data Management

Environmental Management System

- Environment, Health, Safety and Social Responsibility (EHSSR):
  - Introduced in 2012 to be implemented company-wide
  - Formalized management system that provides a clearly defined structured approach to managing performance of EHSSR
  - System is comprised of eighteen standards
  - Three year implementation cycle
  - First 6 standards to be implemented by July 2013
**Intelex System**

INTELEX Software – Continue Update & Maintenance of System as this is a Large Portion of the Environmental Management System (EMS); Permit tracking system.

INTELEX modules include:
- Policy
- Objective and Targets
- Monitoring and Measurement
- Legal and Other Requirements
- Training and Awareness
- Audits
- Document Control
- Meeting Manager

**Environmental Key Performance Indicators**

Key Performance Indicators (KPI’s) are monthly monitoring system which provide a way to identify areas for improvement.
- Such as: number of exceedences, training hours, materials recycled etc...
  - KPI’s:
    - Training – 40 hrs in 2008; 115 hrs in 2009; 500 hrs in 2010; 910 hrs in 2011; 1763 hrs in 2012
    - Spills – 21 in 2010; 12 in 2011; 18 in 2012
    - New & Updated Plans/SOP’s – 6 in 2011 & 12 in 2012

**Transportation Plan**

• Primary mode of transportation during 2012 was MV Majestic Fjord (operated by Goldbelt)

• Helicopters still used on an as-needed basis (weather)

**Standard Operating Guideline for Eulachon Spawning Season**

- Marine mammal/vessel encounters to be recorded and reported.
- Mutual agreement of 2-3 wk “eulachon spawning season” during which time:
  - No fueling within Berners Bay.
  - “Marine Observer” to accompany crew vessel.
  - No more than 2-3 vessel trips/day.
  - Vessel speed reduced to 13 knots within bay.
  - Reduce fuel shipments by stocking up on fuel prior to eulachon season.
  - Limit barging of concentrate and shipments of chemicals.
  - Adjust routing to avoid fish congregations.
Marine Mammal Monitoring

- 68 marine mammal surveys were conducted from the crew transportation boat running from Yankee Cove to Slate Cove between April 27 and May 18, 2012.
- Marine mammal activity near Slate Cove increased substantially during the last week of April and the “eulachon spawning season” was adopted from April 27 to May 18, when activity declined again.
- The three-week restrictions were placed at the right time in 2012 to cover the greatest marine mammal activity.
- There were no marine mammal encounters in 2012.

Water Quality- Summary of QA/QC

QA/QC Monitoring Data Review:

- Field Blind Duplicate Comparison
- Review of Monitoring Data Collected
  - Laboratory Data
  - Field Data
- Variance Analysis Reports
- Overall Completeness Review

Water Quality- Monitoring Locations

- Outfalls
  - 001 (Active)
  - 002 (Active)
- Receiving Waters
  - Sherman Creek
  - Ophir Creek
  - Slate Creek
  - Johnson Creek

Water Quality- Receiving Waters

In general, monitoring results in 2012 indicate...

- Water quality in the area of the project is very good
- Impact from the project activities is minimal
Water Quality - Receiving Waters

Project Area receiving waters generally...
- Have peak water temperature in August or Sept.
- Have mildly basic pH
- Are at or near oxygen saturation
- Are generally soft (in most cases <100ppm hardness, excluding SH113 and SH103)
- Contain low levels of sulfate (<10ppm, excluding Sherman Creek)
- Have low concentrations of dissolved metals
- Have seasonal fluctuation of conductivity with peak in winter

Water Quality – Sherman Creek

Figures from Volume 2: Water Quality 2012 in the APDES Annual Report

Water Quality – Johnson Creek

Figures from Volume 2: Water Quality 2012 in the APDES Annual Report

Water Quality – Slate Creek

Figures from Volume 2: Water Quality 2012 in the APDES Annual Report

Water Quality- Outfall 001

Mine Water Treatment Plant

On the whole, Outfall 001 effluent discharges...
- Follow seasonal cyclic trends for temperature and dissolved oxygen
- Typically have very low levels of turbidity
- Contain total recoverable metals mostly at or only slightly above detection limits
- Are monitored for constituents that are typically well under permitted limits
Water Quality – Outfall 002

Figures from Volume 2: Water Quality 2012 in the APDES Annual Report

Wildlife Monitoring: Slate Lakes

- 21 x 50m transects around the Slate Lakes basin. Monitored weekly for wildlife sign e.g., Scat, tracks.
- Motion-sensor cameras also record activity on game trails.
One of the most significant uses of the area is by Canada geese near Spectacle Lake in the summer.

Moose and bears appeared to frequent the area as often in 2012 as they did in previous years.

2013 Planned Activities

- Mine Operations: Full-Production for entire year
- Continue to improve system to maintain ammonia within permit limits (Break-point chlorination system)
- Place majority of tailings within paste in underground stopes
- Mill Operations planned to be at full production throughout 2013

2013 Surface Exploration Program

- Plan: 24 drill sites (15,000 ft) (16 sites on Federal land, 8 on Patented Claims)

Cultural Resource Testing

- Probing and Testing - Excavation of Structures F&T. (Both features located at Jualin)
- Full-fill requirement contained in MOA between FS, Coeur, & SHPO

Reclamation Test Plots

- Evaluate reclamation methods proposed at reclamation & closure
- Test plots separated into 3 separate areas (1500 square feet each)
- Each area to have different reclamation treatment (biopolymer from ACOE being tested)
- Weekly monitoring of test plots
**Comet Power House**

- Replace existing emergency back-up 500 kW gen-set with 1.2 kW gen-set
- Install building to house gen-set
- Install fuel tank

**Permits/Plans**

- Approval to Operate Stage 2 Tailings Facility Dam
- Finalize Updated Reclamation Plan
- Integrated Waste Management Permit
- Geochemical Testing & Reporting of Graphitic Phyllite (Barrel Testing Program at the TTF)
- Renewal of Solid Waste Permit
- Modification & Renewal of Wastewater Disposal Permit for Sewer Treatment Plant

**Permits/Plans**

- Site Specific Water Quality Standards for Sherman & Slate Creeks
- Aluminum, Cadmium, TDS, & Sulfate

**Thank-You**