



THE STATE
of **ALASKA**

GOVERNOR MICHAEL J. DUNLEAVY

Department of Natural Resources

DIVISION OF MINING, LAND & WATER

Mining Section

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Pogo Mine Tour Report

Inspection Date: May 23, 2019

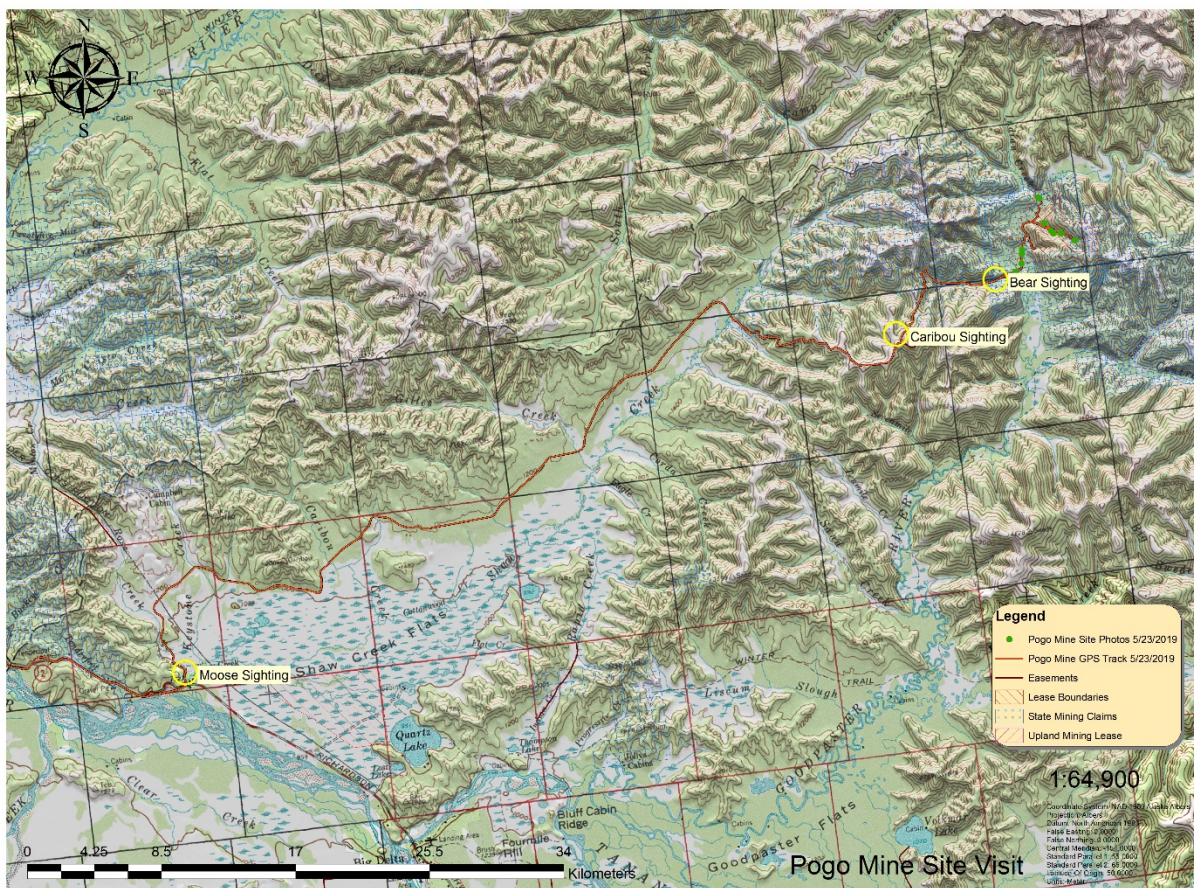
Weather: Partly Cloudy, 62 F

Time of Inspection: Arrival at Mine: 10:30 AM, Depart Mine: 5:00 PM

Operator Contact: Jill Ladegard – Northern Star Pogo

Agency Personnel: William Groom, Brent Martellaro, Steve Buckley (See Attached list of additional tour personnel)

Inspection Objectives: This Mine Tour was conducted to provide information on the continued operations of the Pogo Mine prior to the Annual Meeting.



Map 1: Access into and out of the Pogo Mine. Yellow circles indicate animal sighting.

On the way into the Pogo Mine Site along the access road, several moose were spotted prior to the main gate. Near the mine site a sow black bear and cub were observed walking along the road. At the end of the day, on the way out of the mine site, several caribou were spotted on the ridgeline between the Goodpaster River and Shaw Creek drainages.



Black Bear Sow and cub off of Pogo Mine Access Road.



Map 2: GPS Track of above ground trip locations and Photo Points. All underground photos are GPS referenced to the 1875 Portal.



Waste Storage on west side of Goodpaster River.



Goodpaster River Bridge Crossing



Quartz vein underground with sulfide mineralization.



Underground sludge drill with new gyroscopic alignment box



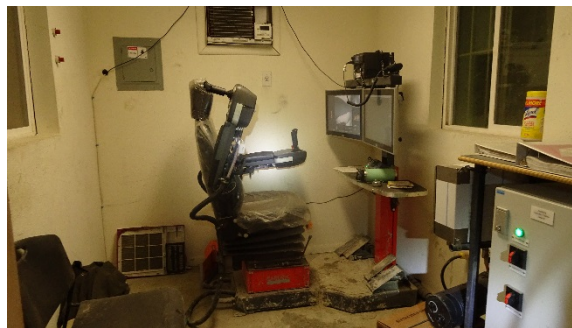
Pyritic Mineralization underground.



Older underground emergency rescue chamber. Northern Star in process of replacing.



New remote underground mucker.



Remote mucker workstation located in separate tunnel.



Graphitic ore stockpile outside of mill.



Top of dry stack tailing facility



Pogo Recycle Tailings Pond (RTP) and dry stack tailings. RTP at low water levels



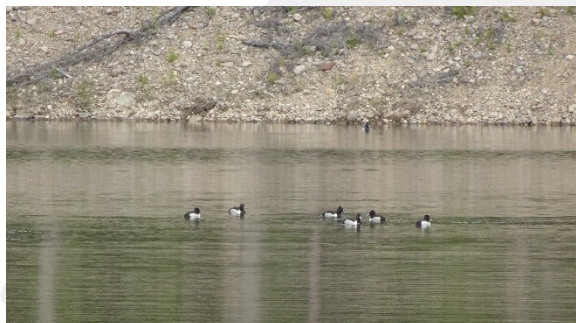
Truck transporting tails to the dry stack.



Interceptor wells below the RTP.



Fresh water entry from the Goodpaster R. to the Off-River Treatment Works (ORTW).



Ring-necked Ducks located in the ORTW Fresh water pond.



Pogo Mine ORTW pump house.



ORTW Mixing pond.



Mine Camp & Office facilities.



Agency Personnel on site for Mine Tour

GROUP 1	GROUP 2
Kyle Moselle (driver)	Jim Vohden (driver)
Deputy Commissioner Goodrum	Commissioner Brune
Steve Buckley	Tim Pilon
Jacklyn Cheek	Brent Martellaro
John Clark	William Groom
Audra Brase	Jenny March
Justin Burrows	David Hite
Ashlee Adoko	

Conclusion: Pogo Mine has seen changes to it's operating practices since Northern Star took over operations, including the acquisition and deployment of a new fleet of underground equipment and technologies. Site conditions appear to be in a stable state and the mine is beginning plans for expansion of mill throughput and mining of new extensions to the north and west.

Action Items: No Action Items resulted from the purpose of this mine tour.

End of Report

Cc: Kyle Moselle (ADNR)
 Ashley Adoko (ADNR)
 Steve Buckley (ADNR)
 Brent Martellaro (ADNR)

Allan Nakanishi (ADEC)
Tim Pilon (ADEC)
Charlie Cobb (ADNR)
Jim Vohden (ADNR)
Kindra Geis (ADNR)
Carolyn Curley (ADNR)
Audra Brase (ADF&G)
Jill Ladegard (Northern Star)