



PEBBLE PROJECT

DRAFT ENVIRONMENTAL BASELINE STUDIES PROPOSED 2008 STUDY PLANS

CHAPTER 8. GEOCHEMICAL CHARACTERIZATION

DRAFT



Prepared For:
State of Alaska Large Mine Permitting Team
Department of Natural Resources

Prepared By:
 THE
pebble
PARTNERSHIP

3201 C Street, Suite 604
Anchorage, AK 99503
(907) 339-2600

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8. GEOCHEMICAL CHARACTERIZATION

The study for geochemical characterization and metal leaching/acid rock drainage (ML/ARD) for the Pebble Project mine site is led by SRK Consulting (Canada) Inc. The objectives and scope of study is described in Chapter 8 of the 2005, 2006, and 2007 Study Plans. Laboratory tests conducted on samples taken from previous years will continue for samples collected in 2008.

8.1 2008 Sampling Program

A recent assessment of the distribution of sulphur in the Tertiary Cover Rocks showed that most lithologies were associated with two distinct sub-populations. To ensure that samples included in the characterization program to-date covered the complete range of sulphur characteristics shown by the Tertiary lithologies, attributes of the Tertiary samples selected for inclusion in humidity cell test work were compared to attributes of these sub-populations. For the most part, the selected samples were considered representative of both sulphur sub-populations identified. However, in the case of the dacite (TD) and mudstone (TY), the samples do not fully represent the high-sulphur populations. For this reason, two extra samples have been identified for inclusion in a 2008 sampling program. Table 8.1 summarizes the program tasks being performed in 2008. Figure 8.1 shows the program sample locations.

TABLE 8-1
Pebble Project Environmental Studies
Study Summary for Geochemical Characterization and Metals Leaching/Acid Rock Drainage, 2004-2008
Consultant: SRK Consulting

Discipline	2004 Data Collected or Tasks	2005 Data Collected or Tasks	2006 Data Collected or Tasks	2007 Data Collected or Tasks	2008 Tasks to be Completed
ML/ARD Mine Study Area	Selection of samples for static testing	Initiation of humidity cells on rock samples	Continued kinetic testing on rock samples	Continue kinetic testing on Pebble West rock samples	Continue kinetic testing on Pebble West rock samples
	Static testing	Initiation of humidity cells on tailings samples	Continued kinetic testing on tailings samples	Continue kinetic testing on Pebble West tailings samples	Continue kinetic testing on Pebble West tailings samples
	Selection of samples for kinetic testing	Initiation of column tests on rock samples	Additional static testing on rock samples	Mineralogical characterization of element occurrence in Tertiary rock	Mineralogical characterization of element occurrence in Tertiary rock
	Visit to site to review logging practices	Initiation of column tests on tailings samples		Mineralogical characterization of carbonate in Tertiary rock	Mineralogical characterization of carbonate in Tertiary rock
	Selection of drill-holes for mine walls	Additional static testing on mine-wall drill-holes		Commence field weathering (barrel) tests	Continue field weathering (barrel) tests and parallel laboratory studies
		Specific characterization of Tertiary rock samples		Select samples for ABA and kinetics for Pebble East	Continue kinetic testing on Pebble East rock samples
		2004 progress report		Characterization of Pebble East tailings	Characterization of Pebble East tailings
				Characterization of pyritic tailings	Characterization of pyritic tailings

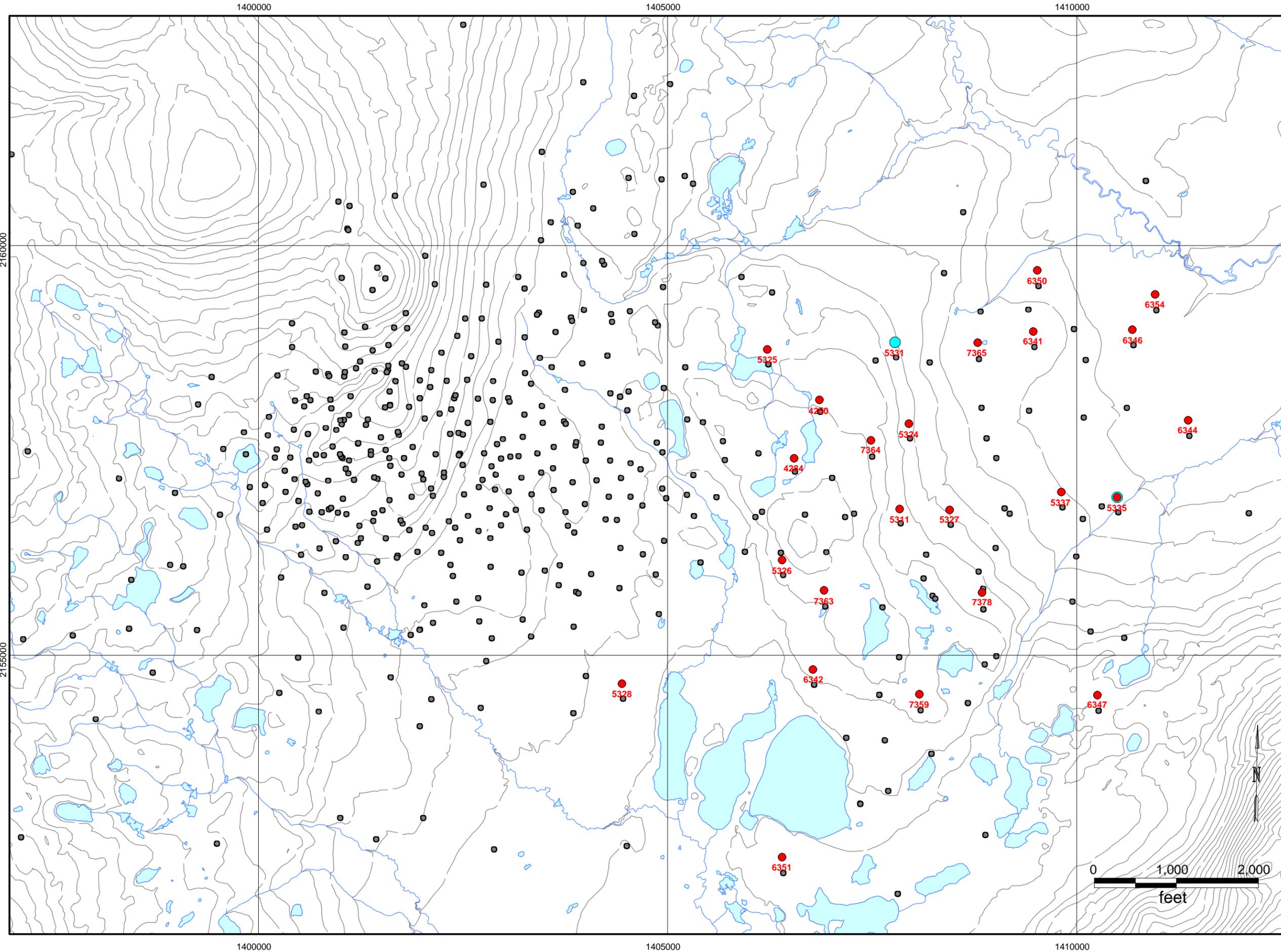
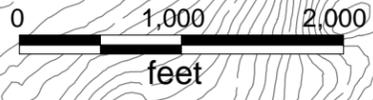


Figure 8-1
Collars of Diamond Drill-holes
Sampled for Humidity Cell Testwork
and Subaqueous Column Testwork,
2008

- DRILL HOLES SAMPLED FOR**
- HUMIDITY CELL TESTWORK
 - SUBAQUEOUS COLUMN TESTWORK
 - OTHER DRILL HOLES

Scale as shown



Alaska State Plane Zone 5 (units feet)
1983 North American Datum

File: PEB_DrillPlan_SRK_Humidity_Subaqueous_Samples_2008.WOR

Date: Aug. 28, 2008

Drawn by: YL, HDSI