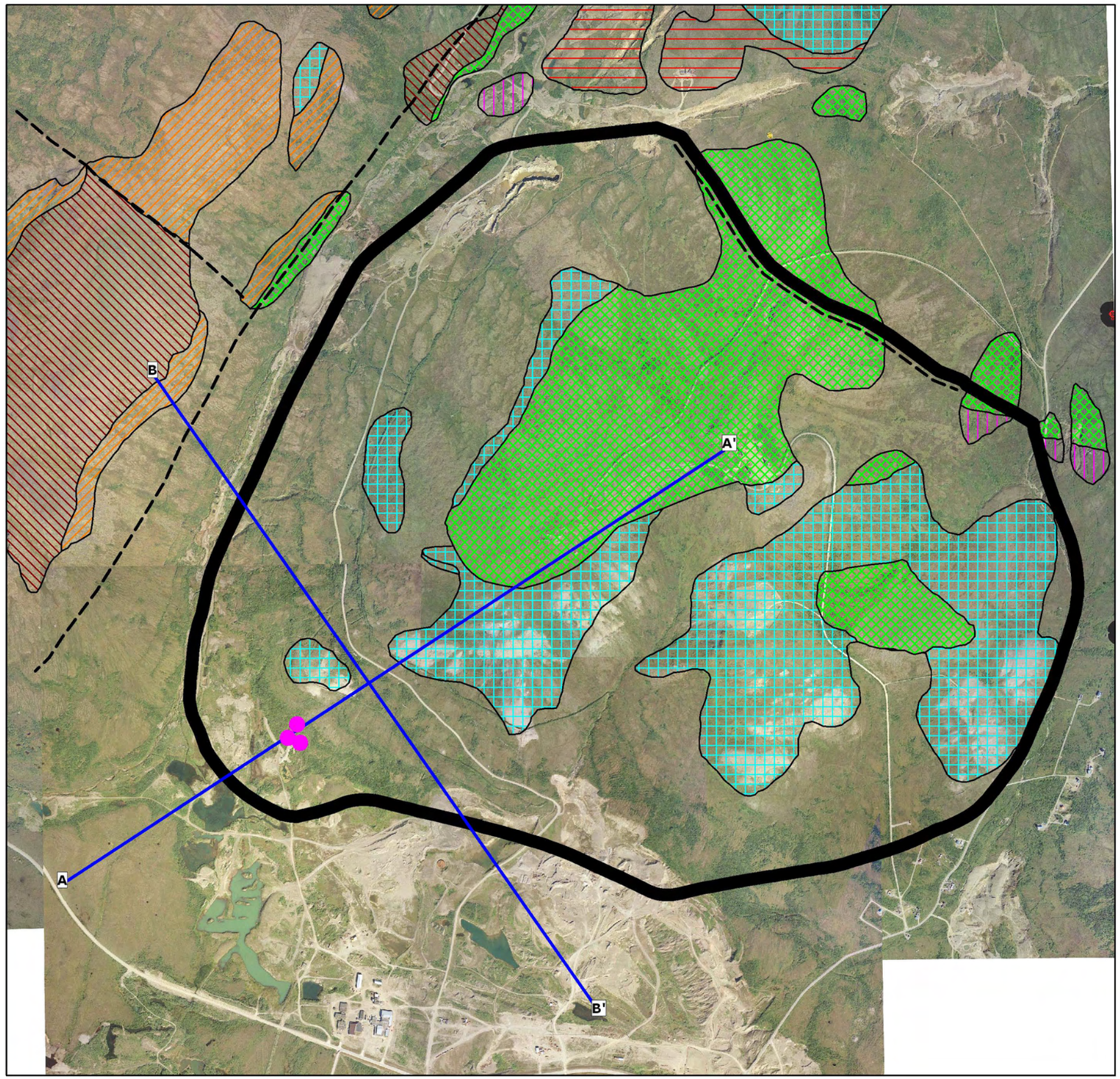

Legend

- Moonlight Wells
- Cross Section Lines
- Well Protection Area
- Faults

Geology by UNIT

- Feldspathic, Orthogneiss And Metavolcanic Schist
- Massive Marble
- Massive Marble ?
- Felsic, Muscovite, Metavolcanic Schist
- Graphitic Schist And Quartzite
- Pelitic, Porphyroclastic, Micaceous, Graphitic Schist
- Chlorite Rich, Metaturbidite Schist, And Marble

0 500 1000 1500 2000 2500
Survey Feet

N

Notes:

Air photo from AeroMap, taken August 6, 2003

Bedrock outcrops and faults present in the area are shown on the map. Unconsolidated materials are not shown for clarity. Geology based on Bundtzen, T. K., Reger, R. D., Laird, G. M., Pinney, D. S., Clautice, K. H., Liss, S. A., and Cruse, G. R., 1994, Progress Report on the Geology and Mineral Resources of the Nome Mining District: Alaska Division of Geological and Geophysical Surveys Public Data File 94-39, 19 pages, 2 maps.

pCPzm Massive Marble (Light to medium gray, massive, blocky, medium to coarse grained marble composed almost entirely of calcite rhombohedrons. Locally unmapped lenses or crosscutting dikes of chlorite-amphibole-garnet metabasite found in outcrop. pCPzm unit thought to be in thrust contact with underlying pelitic Schist (pCPzpm) in Aurora Creek and at other locations in western portion of map area, where sheared dolomite boudins and mylonite 1 to 2 m thick mark contact zone. pCPzm is resistant to very resistant, and forms conspicuous gray hillslopes barren of vegetation).

p**CPzsf Felsic, Muscovite, Metavolcanic Schist (h**eterogeneous unit of (1) zircon rich, muscovite quartzose schist; (2) feldspar-rich, porphyroblastic muscovite schist with minor quartz; and (3) tourmaline enriched, muscovite-chlorite-feldspar schist, referred to as "tourmalite" beds, and denoted as 't" on sheet 1. In latter rock type, tourmaline rosettes are interwoven into bundles and layers of muscovite and phengite. The "tourmalite" zones are spatially related to massive sulfide-barite deposits at Aurora Creek, and may indicate premetamorphic, submarine (?) hydrothermal activity elsewhere in the study area. Generally nonresistant due to very high muscovite-tourmaline content, and form subdued rubble on ridgetops and in stream cuts).

p**CPzspm Pelitic, Porphyroclastic, Micaceous, Graphitic Schist (**Distinctively dark gray, massive to layered, medium to coarse grained, biotite, chlorite, muscovite, porphyroclastic "lumpy" schist, the provenance of which is thought to be pelitic, coarse metasandstone and metaconglomerate. Composed of up to 15 percent graphite, 35 to 40 percent white mica, 20 percent chlorite (usually a retrograde product of biotite), 5 percent pink garnet, 10 percent retrograded and inclusion-charged albitic plagioclase, and minor clinozoisite. Lozenge-shaped masses of albite grains and muscovite-chlorite bundles up to 1.5 cm in long dimension are thought to represent pelitic sedimentary clasts prior to regional metamorphism. pCPzpm is very resistant and forms the most rugged mountain landscape in the study area-particularly in the upper Aurora Creek drainage).

Scale: 1:19,400	CITY OF NOME MOONLIGHT WELLS PROTECTION AREA	Date: Oct. 6, 2006		Figure 2
Datum: NAD27		Drawn by: ME	Checked By: SJ	BEESC No: 25071
Projection: AK State Plane, Z8				