SCHEDULE A

Project Title: **Geochemical reanalysis of archived samples**

Location: Samples originally collected from Nahanni map sheet (NTS 105 I) as part of the Nahanni Integrated Multi disciplinary Pilot Project

Project Leaders: P.W.B. Friske (GSC, Ottawa; phone 1-613-992-1503)

Background:
Continental arc granites of the Tombstone Plutonic Suite extend from Dawson to Macmillan Pass and are associated with large tonnage low-grade gold mineral deposits (e.g., Brewery Creek, Dublin Gulch), and high grade gold vein systems (Keno Hill). Recent studies and exploration success indicate that granites with high potential for hosting gold mineralization extend southeast from Macmillan Pass through Nahanni map area to the British Columbia border. This area continues to be the focus of a large amount of mineral exploration activity, which is using an exploration model based on the 3.6 million ounce Fort Knox gold deposit in Alaska. The Fort Knox area contains similar aged granites (90-95 Ma) that have been offset by the Tintina Fault. Because exploration has now been expanding to include granite-related gold deposits hosted in hornfels zones and shear zones peripheral to the granites themselves, there is enormous potential to expand Yukon's gold resource.

Stream sediment geochemistry is a powerful exploration tool which resulted in the discovery of the Brewery Creek gold deposit in 1987 and the Kudz Ze Kayah massive sulphide deposit in 1994. Because granite-related gold deposits are usually low in sulphides and contain micron-sized gold, they have been overlooked by conventional prospecting in the past, and geochemistry has played a key role in their discovery. In the case of the Nahanni map area, the recent discovery of two promising gold occurrences in adjacent map areas suggests the region display high potential for hosting large tonnage, low-grade gold mineralization.

In the Nahanni map area (NTS 105I), a Regional Geochemical Stream Sediment Survey was first undertaken by the Geological Survey of Canada in 1981, as part of the Nahanni Integrated Multi disciplinary Pilot Project. Samples collected during this survey, which was one of the first to be done in the Yukon, were not analysed for gold. The lack of gold analyses for Nahanni map sheet is a critical gap in the stream geochemical database for Yukon and western Northwest Territories.

Purpose and Objectives:
The reanalysis program will fill a critical gap in the stream geochemical database for Yukon and Northwest Territories. The new data will be a valuable exploration tool.

Workplan/Milestones:
The proposed reanalysis involves direct irradiation and Instrumental Neutron Activation analysis (INAA) of archived samples for gold plus twenty-five other elements including (As, Ba, Br, Ce, Co, Cr, Cs, Eu, Fe, Hf, Ir, La, Lu, Mo, Na, Rb, Sb, Sc, Sm, Ta, Tb, Th, U, W, Yb). It is likely that samples will be analyzed by Becquerel Laboratories of Mississauga, Ontario. Following receipt of analytical results from the commercial laboratory, the GSC will compile and interpret geochemical data and prepare the information in a form suitable for joint GSC/Yukon open file release.

Products:
At this time, it is expected that only digital products will be produced; however, contingent on the availability of funding and adequate time, digital data may also be released in hard copy format.

PURPOSE + OBJECTIVES
The principal purpose of the ~~Stream sed geochem~~ survey ~~will be used for the~~ is to aid in mineral resource assess/ of 2 areas of interest by consenal groups:
Arctic Dempster/Eagle Plains (N)most + Peel River (S-most). RGS surveys are the most important data set used in MRA workshops, where members of industry, academia + govt ~~with~~ w/ ~~extensive field experience in the areas of interest~~ examine all available

geoscientific data to evaluate the potential for undiscovered metallic mineral deposits

2 areas of conserv interest in NE YT lack acceptable RGS coverage.

The N-most area covers E-most part of Richardson Mts. Richardson Mts coincide w/ Paleozoic Richardson Trough, which was site of deep basinal sedimtn. Richardson foothills immediately to E are formed mostly by uDev fine clastic & silty clst, & minor coarse clastics & lst.

K Sharp Mt ASS E of Richardson Mts & consists of mostly marine coarse clastic rocks deposited in cordilleran Foredeep.

High & flts bounding Richardson Trough may have been active since early Paleoz & may have served as fluids constitute significant potential conduits for far traveled mineralizing fluids

K cover:
Tobin Meikle