

Report on geology and preparatory surveys: Summit Extended Claims, B.C.

Claims: Summit Extended -1 395127
Summit Extended -2 395128
Summit Extended -3 395129
Summit Extended -4 395130
Summit Extended -5 395131
Summit Extended -6 395132
Summit Extended -7 395133
Summit Extended -8 395134

Mining Division: SKEENA

NTS Location: 104B020, 104B030

Latitude-Longitude: 56°12'30"N 130°07'30"W

Owner of claims: Seeker Resources Corp 100%;
Owner Number 146527

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July 2004

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FIGURES

Figure 1: Location of Summit Lake area (1:3m)

MAPS

Map 1: Tenements, topography, access, gold occurrences, geochemical and geophysical anomalies, Summit Lake area (1:40,000)

Map 2: Tenement surveys and issues; Summit Lake area (1:40,000)

Map 3: Tenements, Aster image, gold occurrences, geochemical and geophysical anomalies, geology (1:40,000)

Map 4: Tenements, geology, gold occurrences, geochemical and geophysical anomalies (1:40,000)

1 INTRODUCTION

1.1 Location and access

The Summit Extended claims are situated mainly to the west of Summit Lake, about 30km north of Stewart, B.C. [Figure 1]. Centred around 130° 07' 30"W, 56° 12' 30"N (UTM 9, 430000E 6230000N, NAD83), the comprise rugged topography (from 800-2100m elevation), broken by ice fields and glaciers which occupy around 70% of the area of interest [Map 1 and Map 2].

Road access to the Summit extended claims is from Stewart, through Hyder (Alaska) and finally the Granduc road and trucks associated with the former Scottie/Summit Lake Mine. The latter tracks provide direct access to Summit Extended-1 and -2 [Map 1]. However the other claims require ice crossings and negotiation of steep slopes. Helicopter support is desirable in all cases.

1.2 Property information

The Summit-Extended Claim Group comprises eight claims, totalling 110 units (Table 1, Map 1).

Table 1

<u>Tenure Number</u>	<u>Claim Name</u>	<u>Owner Number</u>	<u>Operator</u>	<u>Map Number</u>	<u>Work Recorded To</u>	<u>Status</u>	<u>Area (units)</u>
395127	Summit Extended-1	146527 100%	Trans Pacific Mining	104B03 0	2004.07.1 0	Good Standing 2004.07.10	3
395128	Summit Extended-2	146527 100%	Trans Pacific Mining	104B03 0	2004.07.1 0	Good Standing 2004.07.10	20
395129	Summit Extended-3	146527 100%	Trans Pacific Mining	104B03 0	2004.07.1 1	Good Standing 2004.07.11	20
395130	Summit Extended-4	146527 100%	Trans Pacific Mining	104B03 0	2004.07.1 1	Good Standing 2004.07.11	20
395131	Summit Extended-5	146527 100%	Trans Pacific Mining	104B03 0	2004.07.1 1	Good Standing 2004.07.11	20
395132	Summit Extended-6	146527 100%	Trans Pacific Mining	104B03 0	2004.07.1 1	Good Standing 2004.07.11	3
395133	Summit Extended-7	146527 100%	Trans Pacific Mining	104B03 0	2004.07.1 1	Good Standing 2004.07.11	18
395134	Summit Extended-8	146527 100%	Trans Pacific Mining	104B03 0	2004.07.1 1	Good Standing 2004.07.12	6

- Owner Number 146527: Seeker Resources Corporation

Summit Extended Claims more or less envelope but are mainly to the east of the Scottie/Summit Lake Crown Grants [Map 1]. The Scottie/Summit Lake Mine, from 1981 to 1985, reportedly produced 201,462 tons of ore averaging 0.474opt Au [Aris Report (A.R.) 20,987].

The Summit Extended claims are broadly spatially related to the former Royal, Prince, Scot Summit Lake and Tide Claims formerly owned and operated by Royal Scot Resources Ltd (during the 1980s and into the early 1990s). Although the Scottie Mine and nearby gold mineralisation was discovered in 1931, Royal Scot undertook the only recorded significant exploration in the Summit Lake Claim Group area, apart from B.C. Government regional geochemical, mapping and geophysical work. Royal Scot's work is summarised in (A.R. 20,987; 1990) which also records the exploration history of the area to that time. Trans Pacific Mining

(TPM) has undertaken surface and aerial reconnaissance work prior to the work recorded in this report but accurately located results are not available.

The Summit Extended Claim Group may be characterised as early stage exploration properties. Significant precious (+ base metal) occurrences have been located on the properties which also exhibit widespread geochemical anomalism and alteration zones plus electrical geophysical anomalies. However these indications have been the subject of minimal exploration work, particularly drilling. Prime targets are relatively high grade auriferous vein and breccia systems which may resemble those developed in the Scottie and Silbak Premier mines, localised in intrusion-related geological settings.

1.3 Summary of work done

Work on the Summit Extended Claim Group, outlined in this report, includes

- tenement surveys;
 - development and integration of base topographic, geological maps and remote-sensed imaging;
 - location and assessment of mineral occurrences, geochemical and geophysical anomalies and their integration with base map data in a GIS system;
 - interpretation of district geology and mineralisation/exploration models;
- and, based on the above,
- precious metal targeting, target prioritising and recommendations for further exploration of the Summit Extended tenements.

2 TECHNICAL DATA AND INTERPRETATION – GEOLOGICAL AND PREPARATORY WORK

2.1 Purpose

The work outlined in this report was undertaken to

- accurately locate mineral occurrences, geochemical and geophysical anomalies plus previous exploration information;
- provide a base topographic map including infrastructure, access and current ice extents;
- develop a geological base map and geological interpretation;
- assess priority targets for further work;
- outline an exploration program based on the above for the Summit Extended claims.

2.2 Results

Maps are presented at 1:40,000 scale as the accuracy of the base data does not warrant smaller scales. Maps at such scales can be provided on request.

2.2.1 Tenement surveys

Prior to the geological work it has been necessary to accurately spatially locate the Summit Extended claim boundaries. To this end TPM provided GPS survey data and digital plots by T Young (2003, 2004). These data (including the contiguous Flinders Claims) were imported into a GIS and compared with information for

the Summit Extended Claims plus for Crown Grants and claims held by third parties provided on the B.C. Ministry of Sustainable Resource Management websites.

Map 2 shows the results of this work – notwithstanding that the B.C. Ministry of Energy & Mines/Ministry of Sustainable Resource Management does not warrant the plotted data, there are substantial discrepancies between the positions of plotted legal and witness posts and related tenement boundaries with those supplied by Young.

- there are also possible errors in Young's plotted locations of tenement boundaries (as applied for) and related corner posts where the latter were derived from witness post-azimuth-distance plots, due to Young apparently not accounting for differences between astronomic and UTM north;
- the position and overlaps of the SUM #1 (338685) Claim need to be clarified with respect to Summit Extended- 8 claim (395134).

Because several mineralised systems, geophysical and geochemical anomalies overlap with or are in close proximity to Summit Extended Claim boundaries it is strongly recommended that the boundaries of contiguous claims and Crown Grants be accurately established. This will require a survey of the positions of posts defining these tenements and resolution of any staking conflicts.

2.2.2 Topographic mapping, imaging and interpretation

As a base for exploration work and geological compilation and interpretation topographic maps of the Summit Lake area were developed from the B.C. On-line Cadastre (NTS 104B020, 104B030) and integrated with ASTER satellite imagery in MAPINFO GIS, datasets projected on UTM Zone 9 (NAD 83) – see Maps 1, 3.

ASTER scenes AST_L1b#003_092420002036_09242003003341

Ast_L1b#003_0924200202045_09242003003842 (acquisition date 24/09/2000)

were downloaded, geocoded and partially orthorectified. These scenes were chosen as they represent the most recent, cloud-free scenes with minimal snow cover. Archived Landsat TM scenes over the Summit Lake area suffer from cloud cover and/or extensive snow areas. Remote-sensed scenes were preferred to *archival aerial photography because of the time and expenses involved in accurate orthorectification in this high relief area.*

ASTER scenes were warped to UTM projection and the B.C. Cadastral topographic base. However some substantial discrepancies (100-200m) were noted between NTS 104/B030 and the warped imagery – arising in part from the topographic base and also from incomplete/inaccurate topographic corrections to the ASTER data. A DEM and ASTER level 1a data are currently being required to facilitate better orthorectification and alteration/geological mapping .

Bedrock geological mapping by Royal Scot Resources (A.R. 20987 1990; Figure 5) was digitised and warped to the topographic/ASTER base map [Map 3]. Discrepancies (up to 200m) between this base and the Royal Scot outcrop maps appear to largely result from inaccuracies on the original geological base map.

Although these problems make direct comparisons difficult (especially in the south and west of the Summit Lake areas), it is clear that there has been (in accord with anecdotal information) substantial retreat of glaciers and icefields since the 1980s when the Royal Scot mapping was undertaken. This glacial retreat has exposed substantial new outcrop [Map 3], some of which exhibits alteration which will need to be mapped and prospected.

The ASTER scenes (and photography supplied by TPM) show extensive alteration systems, with which *mineral occurrences and geochemical/geophysical anomalies are associated. Thin snow cover, poor*

resolution of the ASTER data and multiband rectification problems precluded advanced spectral processing and alteration/lithology mapping. The Level 1a ASTER data currently being acquired and access to specialised software will facilitate better mapping prior to the 2005 field season.

The ASTER scenes and topographic were also utilised in geological interpretation as discussed below.

2.2.3 Geology, mineralisation and interpretation

As a base for targeting and exploration in the Summit Lake area a geological map was developed. Mineral occurrences, geochemical and geophysical anomalies were located and integrated with the topographic and geological base to facilitate targeting and target prioritisation.

The geological base is mainly after Royal Scot Resources (1990; A.R. 20987, Figure 5), which represents the most comprehensive and detailed mapping in the Summit Lake area. This was examined in the context of the ASTER imagery and also regional aeromagnetic images (the latter (NTS104B020/030) downloaded from the Map Place) and additional fault systems interpreted [Map 4].

The Summit Lake Claims are mainly underlain by the Unuk River Formation of the Hazelton Group, intruded by the Jurassic Summit Lake Texas Creek Granodiorite/Quartz Monzonite stocks. Largely composed of andesitic volcanics and volcanoclastics, the Unuk River Formation contains some intercalated metasediments and a sediment-dominated lower unit. The andesitic units are slightly more magnetic than the magnetically flat metasediments which may indicate some mismapping in the far west of the area. Unuk Formation units generally dip moderately to steeply E-ENE, forming the western limb of a regional synclinal zone to the east of Summit Lake.

The weakly magnetic granodiorite/quartz monzonite stocks may relate to a larger pluton at depth as indicated by outcrop patterns and a broad thermal metamorphic aureole which occupies much of the Summit Lake area. The geometries of the stocks appear to reflect NE and NW fracture systems and the intrusions cross cut and may postdate the major movements on inferred NNE and NNW fault systems. However the Morris Summit Fault largely postdates the intrusions. This NW-striking fault system appears to dip moderately to the SW and exhibits S block up, sinistral displacements of several hundred metres.

The locations and nature of precious and polymetallic mineral occurrences, stream sediment geochemistry and geophysical anomalies in the Summit Lake area were compiled from Assessment Reports (see reference list for reports utilised), B.C. Minfile and Mapplace databases plus unpublished reports by Royal Scot Resources (for Summit Lake Mine bases) and reconnaissance work by Trans Pacific Mining. However locations are commonly poorly constrained due to inconsistencies in and uncertainties on topographic bases in older Assessment Reports and Royal Scot data, particularly in the vicinity of the Summit Lake Mine. A few mineral occurrences were more accurately (GPS) located in a brief field visit by the writer in 2004.

The results of the compilation were integrated into a GIS and plotted on Maps 3, 4. Together with a review of data (provided by Trans Pacific Mining from time records) for Summit Lake/Scottie Mine the compilation was utilised for mineralisation targeting and target prioritisation models.

Precious metal-bearing mineralisation in the Summit Lake area takes the form of vein veinlet/fracture and locally breccia veins, typically moderately-to-steeply dipping and striking NW and NE. Higher grades are commonly associated with high sulphide contents, pyrrhotite \pm pyrite in the case of gold and base metal enriched in high silver occurrences, lower grade material occurring in less sulphide-rich quartz-carbonate veins and pyritic shears and fractures (eg A.R. 20987 and Summit Lake Mine data). The high sulphide contents of mineralised systems may result in low resistivities and prominent EM anomalies (eg Summit Lake Mine, Maps 3, 4).

The vein networks are associated with NW- and NE-trending shear/fault zones, which predate major movements on the Morris Summit Fault, and also appear to have influenced emplacement of the granodiorite-quartz monzonite stocks. Mineralisation is spatially related to these intrusions and occurs in the roof zone of an inferred underlying pluton. The more massive metavolcanics interrelated with or abutting metasediments appear to be preferred hosts.

The pyrrhotitic nature of high grade mineralisation is consistent with moderate temperatures of formation and this, along with the structures and textures of mineralisation, are compatible with its mesothermal intrusion-related rather than epithermal setting. The Summit Lake systems may thus have considerable depth potential.

Propylitic (\pm phyllic) alteration envelopes the sulphidic vein systems and contributes to colour anomalies in exposed bedrock. Such anomalies can be mapped by aerial photography and/or Aster imagery to outline prospective zones. Arsenic enrichment of auriferous zones points to the use of Au, As stream sediment geochemistry and scree/base of slope sampling in prospecting.

2.2.4 Targets and exploration program (2005)

Prime targets in the Summit Extended Claims are high grade precious metal-bearing veins, vein networks and breccia zones spatially associated with an in the roof zone of Texas Creek granodiorite-age plutons. Such targets are likely to resemble mineralised zones in the Summit Lake Mine and in the region exhibiting

- NW and/or NE orientations and steep dips related to shear and fracture zones;
- high sulphide (particularly pyrrhotite) contents (and related electrical conductivity) and arsenic enrichment;
- propylitic (\pm phyllic) alteration envelopes and localisation in more massive metavolcanic (and intrusions) near metasedimentary contacts.

In the light of these criteria and accessibility, Summit Extended targets are prioritised in Table 2 – see also Maps 3, 4. Table 2 contains recommended follow up work on each target zone.

In view of accessibility, efficiency and safety issues it is strongly recommended that exploration work (except in 395134) be helicopter-supported. This will facilitate advancement of the best targets into first stage drilling even in the short (relatively snow free) field season for Summit Lake.

Table 2: Targets and exploration program

Target zone	Locations (see Maps 3, 4)	Priority	Recommended work program
'C', 'D', 'E' and 'F' zones	395134 and extensions ('C') into 395127 (pending clarification of tenement boundaries)	2	On ground location, resampling and mapping of sulphidic zones and on-strike extensions. First stage drilling if continuity of gold grades is demonstrated by surface work
Back Grid	395129	1	Systematic sampling and mapping of sulphidic alteration zones and their extensions. Ground electrical geophysics to clarify under ice extensions
Sulphide Grid and surrounds	395129	1	As for Back Grid, to include follow up electrical geophysics on under-ice EM anomaly. Drilling of both Back and Sulphide grids if grade continuity appears likely

EM anomaly 'B' and surrounds	395133 and western 395131	3	Surface mapping and sampling of potential extensions of EM Anomaly B to the south to clarify nature of EM anomaly ground, electrical geophysical survey over outcrop and anomaly B
Outcrop areas 395131	395131	3	Surface mapping and sampling of recently exposed areas near southern and western tenement boundaries, adjoining EM anomalies and mineralised zones in contiguous tenements
EM Anomaly 'C'	395130	3	Mapping and sampling of recently exposed bedrock in EM anomaly 'C'. Ground electrical geophysics to locate potential drilling target (mainly under ice)
Non specific	All tenements	4	Mapping and sampling of colour anomalies/sulphidic zones/areas exposed by recent glacial retreat

3 ITEMISED COST STATEMENT

<u>Contractor/consultant</u>	<u>Tasks and products</u>	<u>Rates per day/ days</u>	<u>Total cost C\$</u>
Resource & Exploration Mapping (REM)	Data capture, data registration and integration, GIS development, map and diagram production	C\$400/11.2	4 498
Satellite Mapping	Image processing, registration and warping, ASTER and map data	C\$500/1.8	911
Taylor Wall & Associates	Data compilation and review, data management, geological interpretation, field work (1 day), report writing (2 days)	C\$920/8	7 360
			C\$ 12, 769

4 AUTHOR'S QUALIFICATIONS

V J Wall is Principal of Taylor Wall & Associates, an internationally recognised, Australian-based geoconsultancy. He has 38 years geoscientific experience spread through academia, mineral and mine exploration, consulting and research. A Fellow of the Australian Institute of Geoscientists, Wall is also a member of several other professional societies. He graduated B.Sc.Hons. (Sydney) and Ph.D. (Monash).

5 REFERENCES

B.C. Assessment Report (and references therein)

- Aris 06198 (1978) Bar Silver, Mountain Girl, Vimy
- Aris 08520 (1981) Hollywood
- Aris 10738 (1983) Prince, Scot, Scotty, Summit Lake
- Aris 11987 (1984) Hollywood
- Aris 12117 (1985) Tide 83, Tide 85, Tide 87, Tide 89, Tide 91
- Aris 12342 (1985) Aug 1, C.G. 6296-6301, C.G. 6405-6412, Don 1-3, Sal, Scot 1-7, Scotty, Summit 1-2
- Aris 12808 (1985) H1 HO
- Aris 13593 (1990) Bow 1, Wow 1
- Aris 14642 (1986) Tennyson 1-4
- Aris 15626 (1987) Tide 2
- Aris 16768 (1989) Scotty
- Aris 17016 (1989) Prince 1-6, Prince Fr., Summit Lake 1-6, Summit Lake 7 Fr., Summit Lake 8, Royal 1-3, Scot 6-7, Scot 11
- Aris 17894 (1989) Tide, Low Tide, Tide 2, Berendon 2-5
- Aris 18201 (1989) Hollywood 1-11
- Aris 19302 (1990) Summit 1-2
- Aris 20987 (1992) Scot 1, Scot 6, Scotty, Prince #2, Summit Lake 1-2
- Aris 21822 (1992) Summit 1
- Aris 23102 (1994) Summit 1-3
- Aris 23220 (1994) Troy
- Aris 23553 (1995) Summit 1-4
- Aris 23874 (1996) Scot 3-5, Tide 83, Tide 85, Tide 87, Tide 89, Tide 91
- Aris 24127 (1996) Summit 1-4
- Aris 24905 (1997) Mining Lease 448, Martha Ellen
- Aris 24912 (1997) Summit 1-4
- Aris 25225 (1998) Summit 8, Scot 3-5
- Aris 25677 (1999) Summit 1, Summit 4
- Aris 26378 (2001) Summit 5
- Aris 27077 (2004) Bow 1
- Aris 27163 (2004) Summit 5

Unpublished reports and maps by Royal Scot Resources and related companies (1973-1990)

B.C. Minfile (and references therein)

- 104B-030
- 104B-034
- 104B-036
- 104B-039
- 104B-074
- 104B-075
- 104B-130
- 104B-131
- 104B-132
- 104B-133
- 104B-139
- 104B-140
- 104B-254

BRITISH COLUMBIA Project Locations and Infrastructure



- Au project
- ▲ Cu-Au project
- ▼ Mo project
- Canada - Alaska border
- Town
- + Airport
- +— Railway
- == Road/track
- River/lake
- Glacier

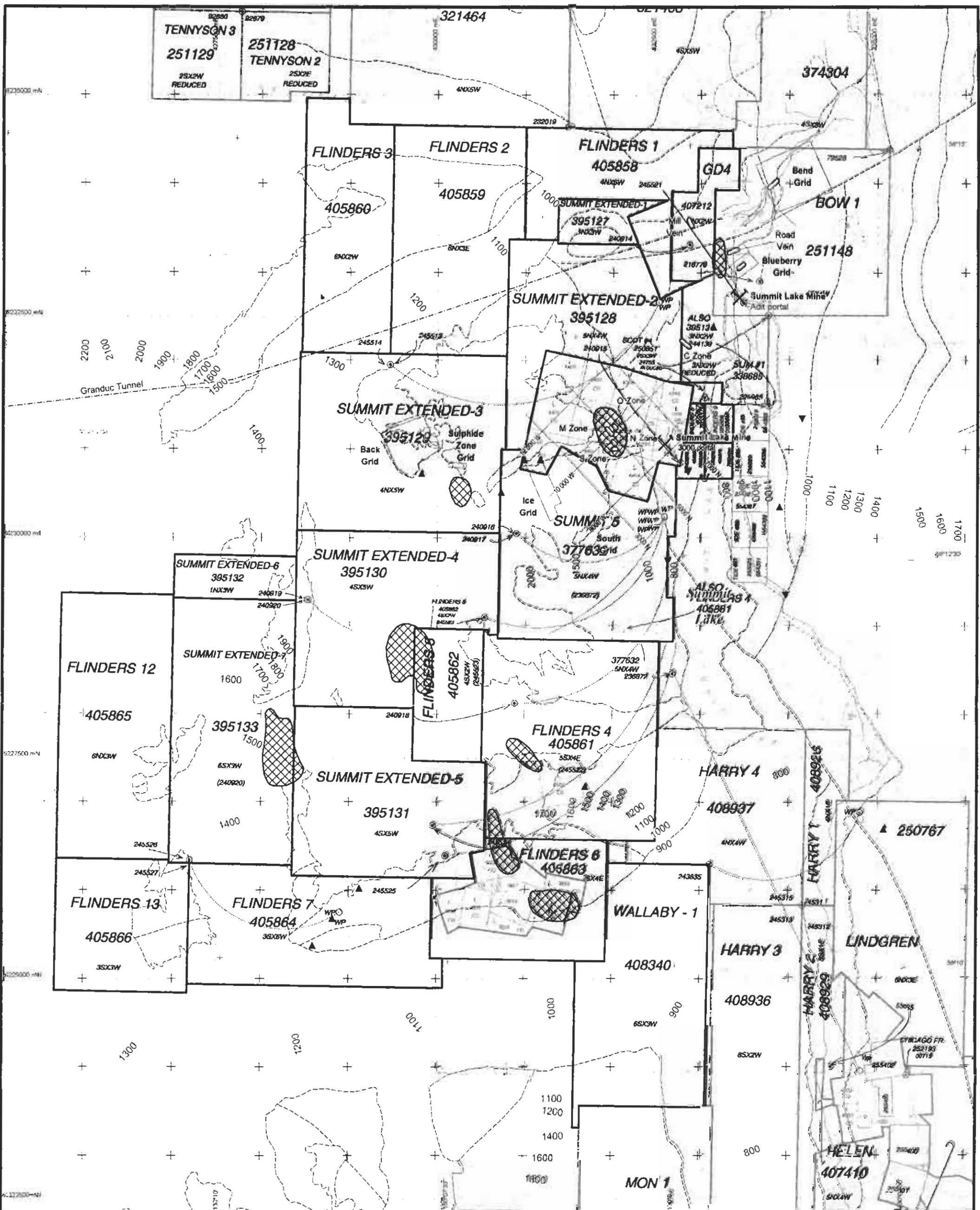


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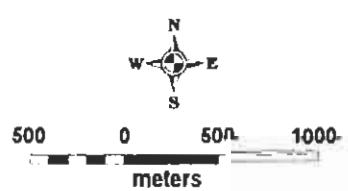
Projection: Lat/Long, WGS84



Figure 1

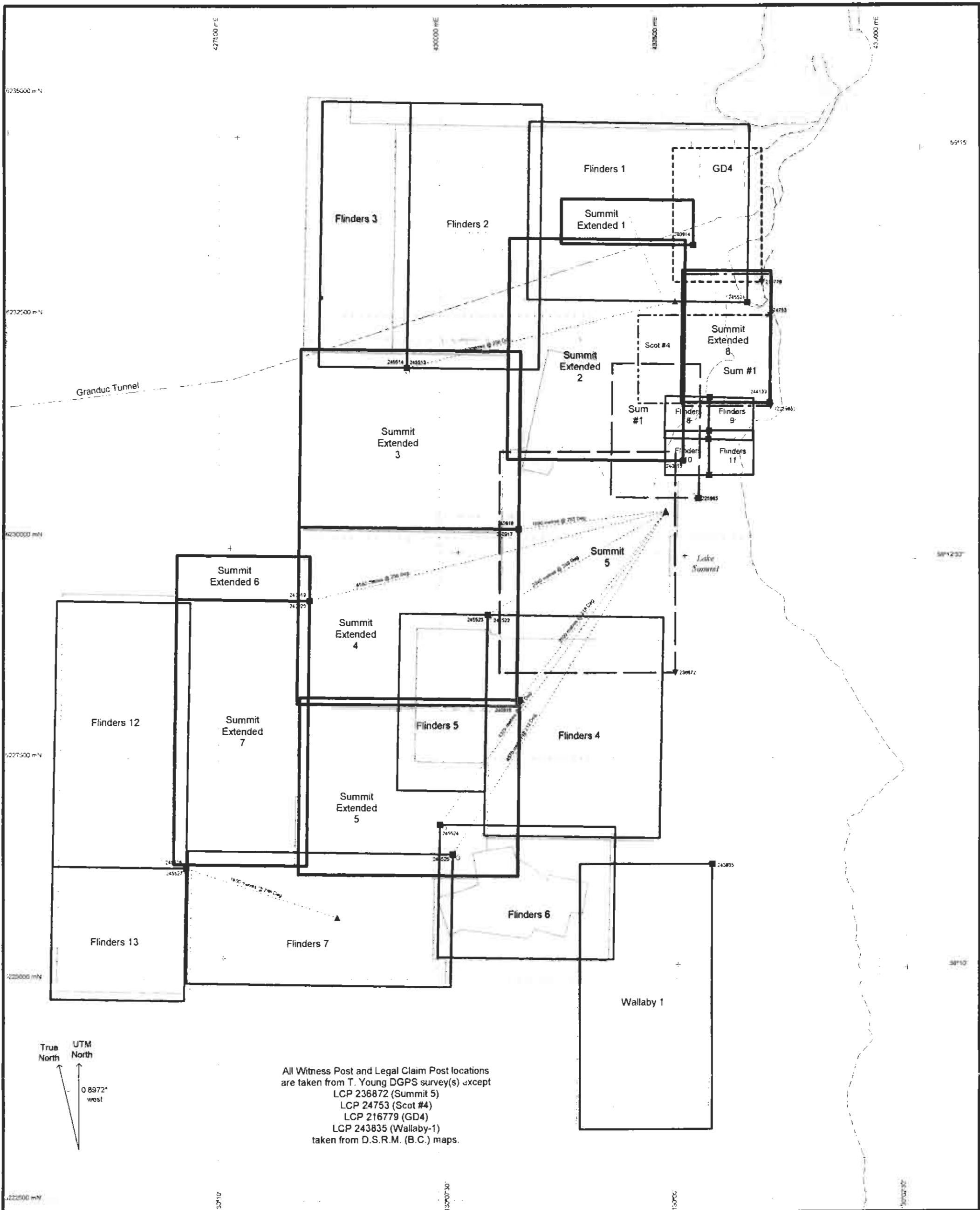


- | | | | |
|--|-------------------------------|--|-------------------------------|
| | Auriferous vein system | | Claims - Trans Pacific Mining |
| | Au/polymetallic occurrence | | Crown grants/claims - other |
| | Au/As stream sediment anomaly | | Road |
| | EM Anomaly | | Airstrip |
| | Geological contact | | Granduc Tunnel |
| | | | Grid |
| | | | Stream |
| | | | Topographic contour |



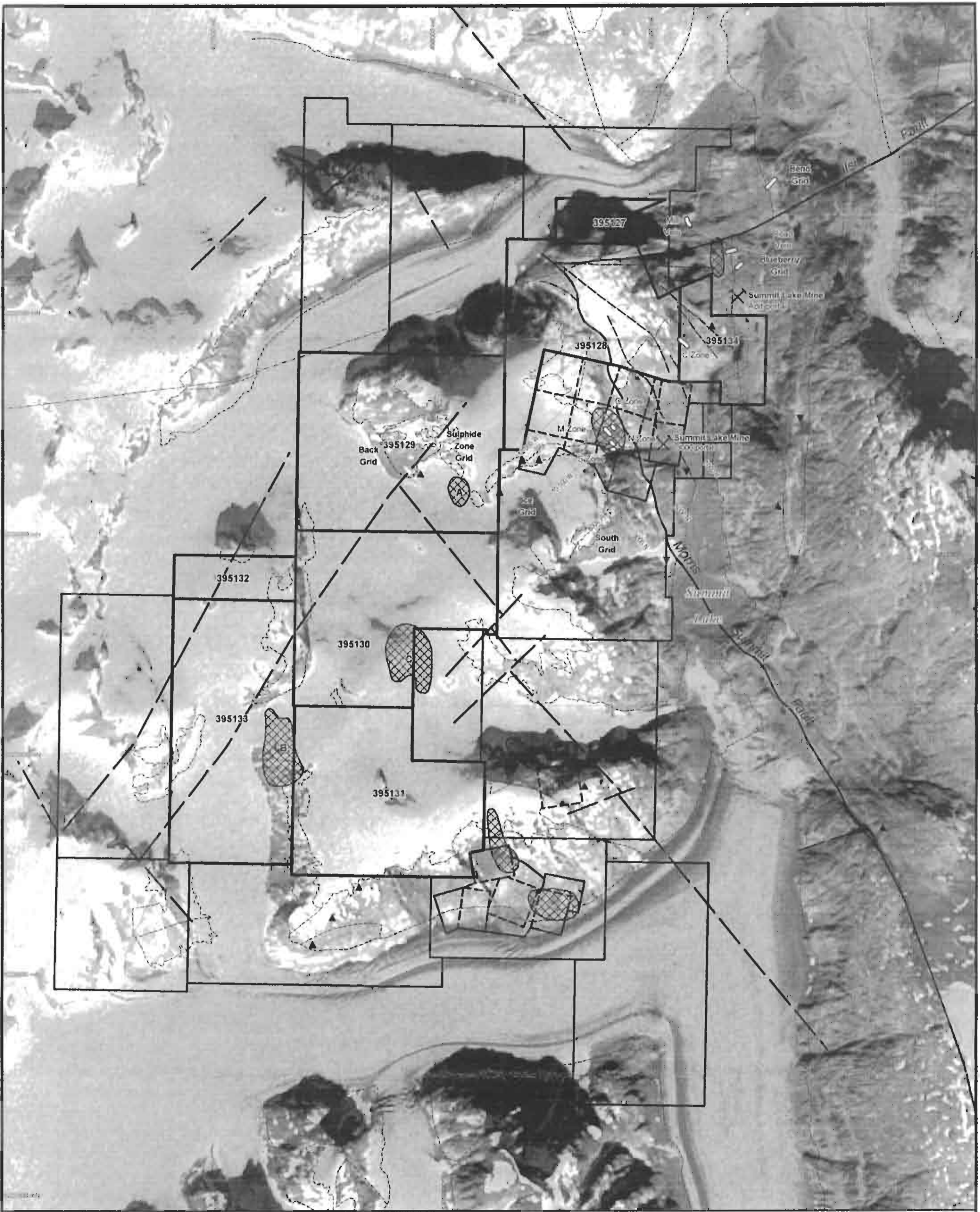
Summit Lake

Tenements, topography,
gold occurrences,
geochemical and geophysical
anomalies



Summit Lake

Tenement Survey

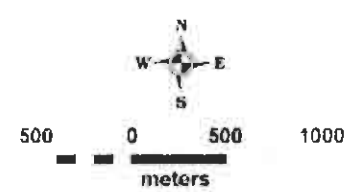


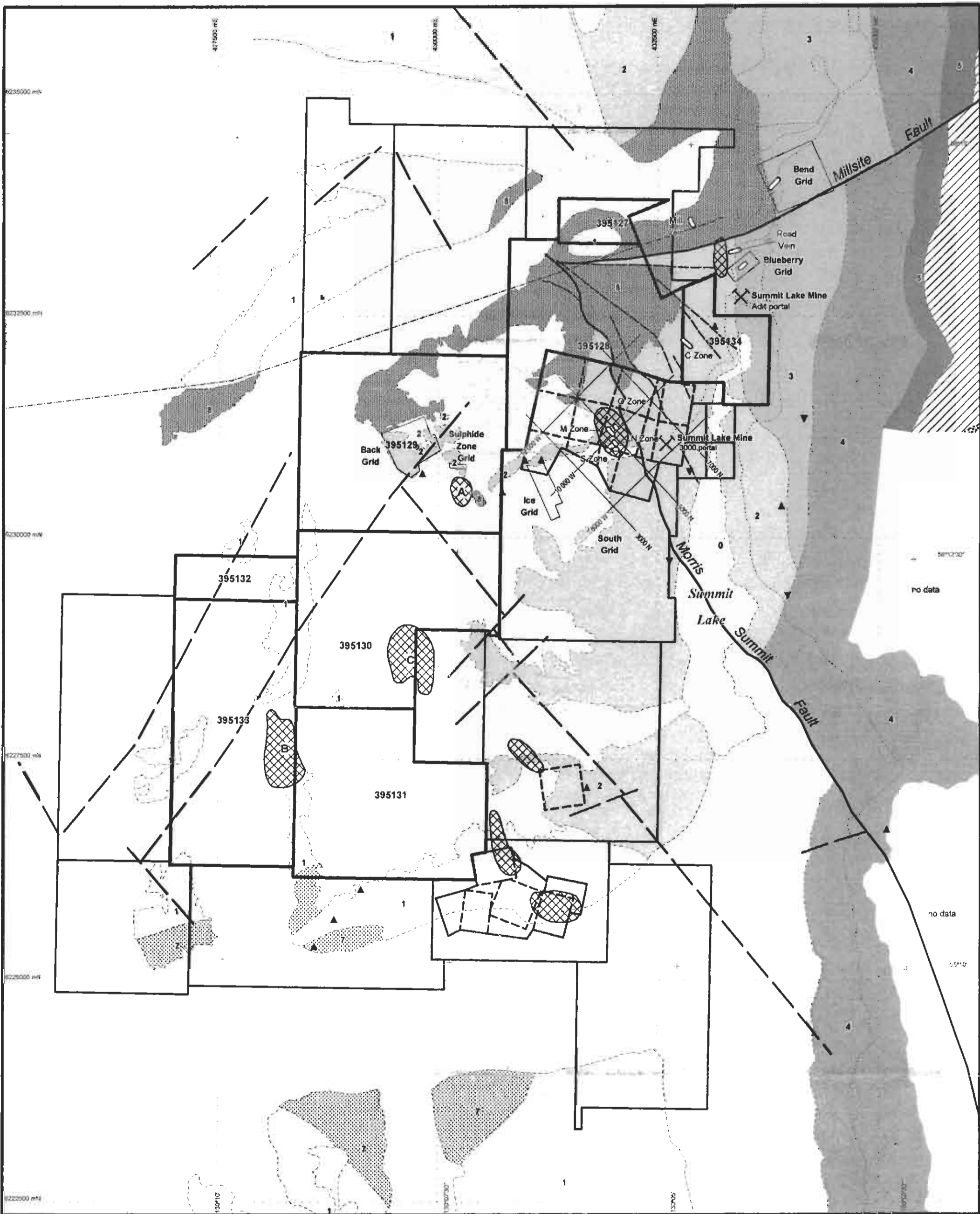
- | | | | |
|--|-------------------------------|--|--------------------------------|
| | Auriferous vein system | | Claims - TPM - Summit Extended |
| | Au/polymetallic occurrence | | Claims - TPM - other |
| | Au/As stream sediment anomaly | | Crown grants/claims - other |
| | EM Anomaly | | Road |
| | Fault (mapped/inferred) | | Airstrip |
| | Geological contact | | Granduc Tunnel |
| | | | Grid |

Aster Scenes: AST_L1B#003_09242000202036_09242003003341
 AST_L1B#003_09242000202045_09242003003342
 Acquired: 24th September 2000

Summit Lake

Tenements, Aster image,
 gold occurrences, geochemical
 and geophysical anomalies,
 geology





9 Ice	395130 Claims - TPM - Summit Extended	 500 0 500 1000 meters UTM zone 9 (NAD83)
Summit Lake Granodiorite	Claims - TPM - other	
Texas Creek Granodiorite	Crown grants/claims - other	<h2 style="text-align: center;">Summit Lake</h2> <p style="text-align: center;">Tenements, geology, gold occurrences, geochemical and geophysical anomalies</p> <p style="text-align: right;">NTS 104B020,030 Map 4</p>
Betty Creek Formation	Road	
Unuk River Formation	Airstrip	
Andesite	Granduc Tunnel	
Andesitic tuff	Grid	
Siltstone	Auiferous vein system	
Andesitic tuff	Au/polymetallic occurrence (▲)	
Siltstone	Au/As stream sediment anomaly (▼)	
	EM Anomaly (⊗)	
	Fault (mapped/inferred)	
	Geological contact	