GEOCHEMICAL & GEOLOGICAL ASSESSMENT REPORT

on the

TAN PROPERTY

Kamloops Mining Division, British Columbia

Field Work: Sept 6 – 10, Oct 4, 2001

Claims: Tan 1-4

Location:
- 45 Km Northwest of Revelstoke, B.C.
- NTS Map No. 082M/02
- Latitude: 51 ° 11.5 ' North
- Longitude: 118 ° 43.5' West

Prepared By:

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W. Gruenwald, P. Geo.

November 15, 2001

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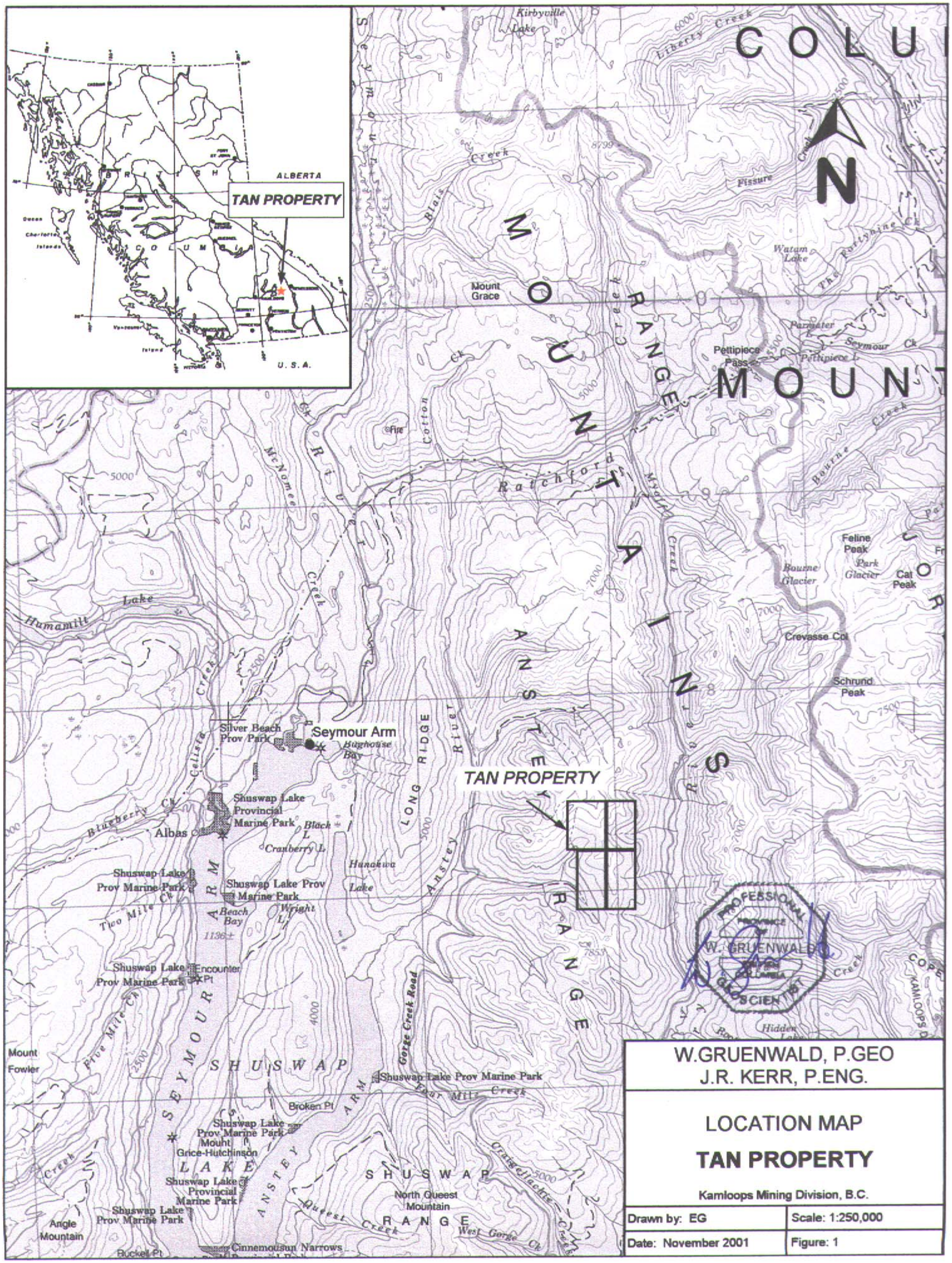


W.GRUENWALD, P.GEO
J.R. KERR, P.ENG.

LOCATION MAP

TAN PROPERTY

Kamloops Mining Division, B.C.

Drawn by: EG	Scale: 1:250,000
Date: November 2001	Figure: 1

INTRODUCTION

General Statement:

While working on a Prospectors Assistance grant in 1999, five "intrusion related" gold occurrences were discovered along recently constructed logging roads. These were staked and are referred to as the GQ property. During this program several areas containing anomalous rare earth elements and tantalum in stream sediments were also identified. The recent surge in the price of tantalum and increased activity spurred by Commerce Resources on a large carbonatite occurrence near Blue River prompted the acquisition of the Tan claims. This report describes an exploration program of prospecting and geochemical sampling conducted on the Tan property in 2001.

Location and Access:

The Tan property is centered approximately 45 kilometres west-northwest of Revelstoke and 18 kilometres southeast of the community of Seymour Arm, B.C. (Figure 1) Geographic coordinates are 51°11.5' north latitude and 118° 43.5' west longitude on NTS Map No. 082M/02W.

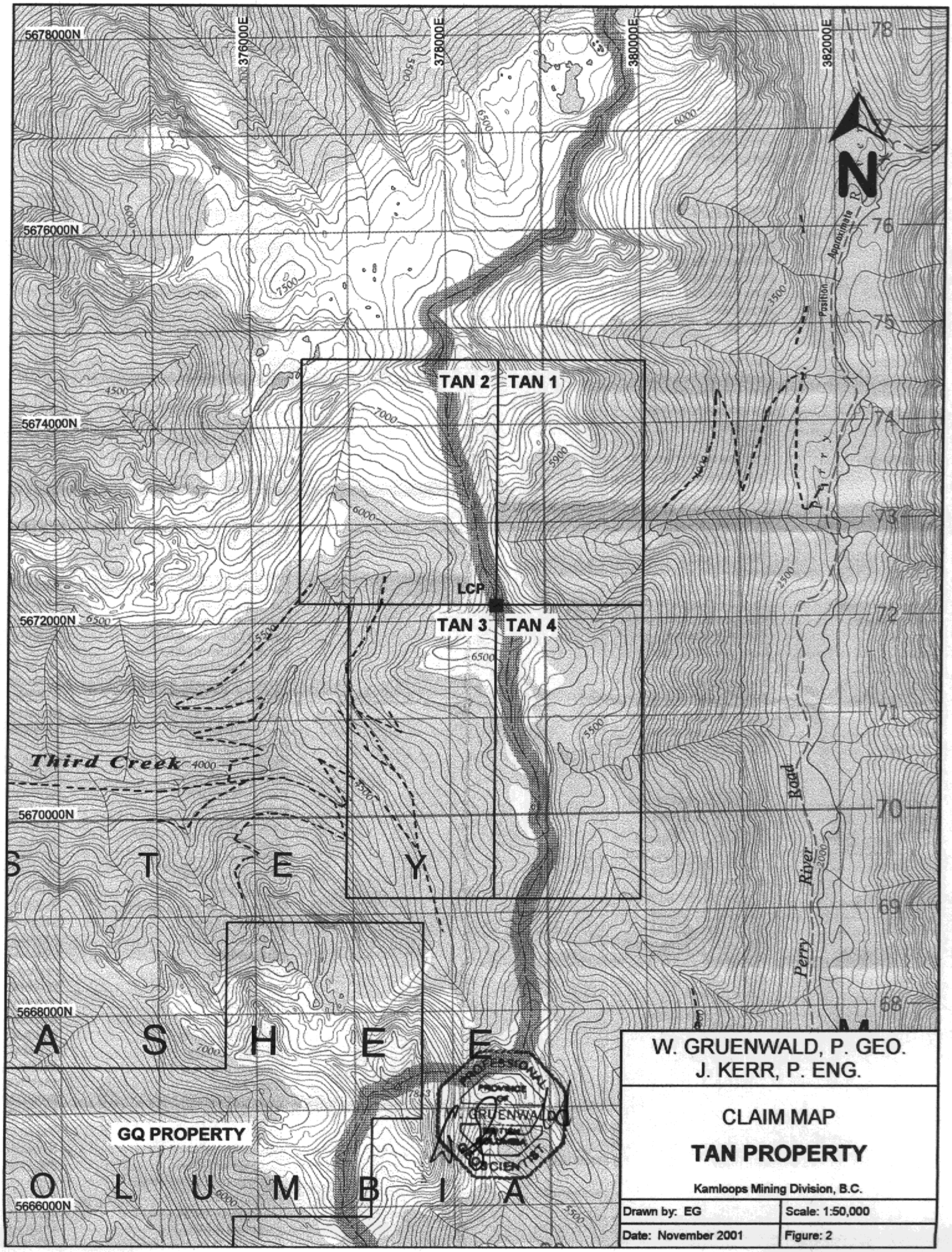
Access to the project area is via the Trans Canada Highway between Sicamous and Revelstoke near the Louisiana Pacific (Evans) mill. A major logging road along Craigallachie Creek and Anstey River (Gorge Creek road) provides access to the Anstey Range. At kilometre 41 a road heads easterly along Third Creek and transects the western part of the property. New logging along the west side of the Perry River provides access to the easternmost boundary of the property (Figure 2).

Physiography:

The Tan property is situated in rugged terrain of the Anstey Range along the west flank of the Monashee Mountains. Glaciation has been extensive resulting in deeply incised drainages. The central portion of the property straddles the height of land between the Anstey River to the west and Perry River to the east (Figure 2). Third Creek, the largest on the property, flows westerly into the Anstey River. Several smaller drainages in the eastern portion of the property flow to the Perry River. The majority of the property slopes moderately to steeply to the southwest and easterly. Topographic elevations range from 1280 metres along Third Creek in the southwest to 2500 metres at the height of land along the northern claim boundary.

Climate and Vegetation:

The Monashee Mountain Range is characterized by temperate climate and moderately high annual precipitation. Winter snow packs of 3 to 5 metres are not uncommon at the higher elevations. The ample water supply supports a wide variety of coniferous and deciduous vegetation. Commercial stands of cedar, hemlock, fir and pine are found, usually below elevations of 1500 metres (5000 ft). At higher elevations, spruce and balsam predominate. Alpine areas are typically found above 1800 metres.



5678000N
5676000N
5674000N
5672000N
5670000N
5668000N
5666000N
376000E
378000E
380000E
382000E
N
TAN 2
TAN 1
LCP
TAN 3
TAN 4
Third Creek
Perry River Road
Approximate Position
S T E Y
A S H E E
O L U M B I A
GQ PROPERTY
W. GRUENWALD, P. GEO.
J. KERR, P. ENG.
CLAIM MAP
TAN PROPERTY
Kamloops Mining Division, B.C.
Drawn by: EG
Scale: 1:50,000
Date: November 2001
Figure: 2

Claims:

Prior to 1999 there were no mineral claims in the Anstey Range. Discoveries made during the summer of 1999 prompted the staking of several claims (GQ property) near the headwaters of Second and Third Creeks. Exploration work in 2000 led to the staking of the Tan claims in 2001. Details of the claims are as follows:

Claim Name	Tag No.	Record No.	No of Units	Expiry Date
Tan 1	215786	384320	15	Feb 28, 2001
Tan 2	215787	384321	20	Feb 28, 2001
Tan 3	208305	384322	18	Feb 28, 2001
Tan 4	220761	384323	18	Feb 28, 2001

The claims are situated in the Kamloops Mining Division and are registered to the writer. The writer and Mr. John Kerr each own a 50% share of the property. There is no private land indicated within 14 km of the property.

History:

Exploration work is documented primarily in the northern part of the Anstey Range. Two carbonatite occurrences known as the Ren (Ce, La, Nb and Nd) were explored in 1983 by Duval Exploration and in 1989 by Teck Exploration. Teck conducted the most extensive work consisting of detailed soil, silt and rock sampling, as well as magnetic and radiometric surveys. A total of 745 metres of trenching were also completed. Although the mineralization was considered to be too low grade, there were recommendations to follow-up highly anomalous lanthanum values in a creek three kilometres to the southeast.

During August 1994, a Prospector's Assistance Grant was awarded to Mr. Terry Turner. The exploration target was stratabound lead-zinc mineralization similar to the Cottonbelt deposit on Mt. Grace north of Ratchford Creek. The work conducted by Mr. Turner straddled Ratchford Creek and covered the Ren carbonatite showing. A small lead-zinc mineralized zone was discovered along Ratchford Creek, but was not considered of economic interest. Mr. Turner recommended that "future exploration should be concentrated south of the project area".

The writer was awarded a Prospectors Assistance Grant in 1999 to explore a 300m^2 area northeast of Shuswap Lake. The Perry River project consisted of prospecting, stream and rock sampling in an area that had only recently become road accessible. The discovery of several new mineral occurrences prompted the acquisition of the GQ property. During the following year, under another grant, the writer focused on exploring the GQ property. Follow-up of streams containing anomalous amounts of tantalum and niobium was also conducted. Two of the primary targets are now within the Tan claims.

REGIONAL GEOLOGY

The GQ property is situated within metamorphic, plutonic and sedimentary rocks of the Omineca Belt. The metamorphic, structural and intrusive history of these rocks is complex and spans a geologic time frame from Paleozoic to Eocene.

The Omineca Belt in southern British Columbia comprises metasedimentary rocks of the Windemere and Purcell Supergroups as well as Kootenay Terrane. Also present are metamorphic core complexes, the two most local being the Shuswap and Monashee complexes (Figure 3).

Two major structural features in the region are the Adams-North Thompson fault and the *Monashee Décollement*. The *Monashee Décollement* is described as a zone up to one km thick that represents a major west dipping contractional (thrust) structure. The footwall terrane known as the Monashee Complex is the deepest exposed structural level of the southern Omineca belt. The complex consists of an Early Proterozoic paragneiss core (Frenchman's Cap dome). These rocks were intruded by 2,000 Ma granitoid plutons. Unconformably overlying the core rocks are stratified metamorphic rocks that include a basal quartzite conglomerate that in turn is covered by a thick succession of pelitic, psammitic and calc-silicate gneiss (2,000 to 770 Ma). The metamorphism of the cover rocks is regarded to have occurred from Middle Jurassic to Paleocene.

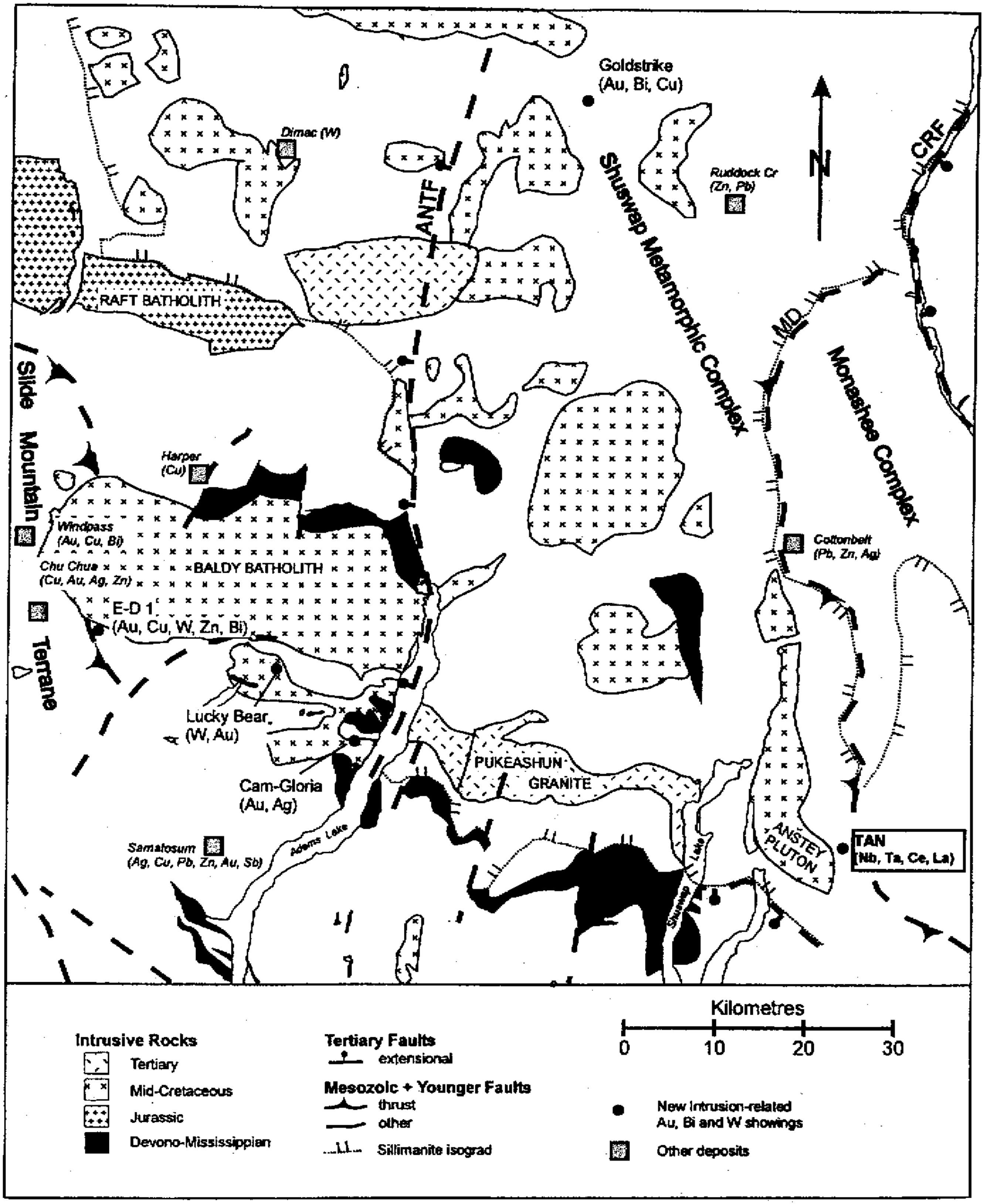
The hanging wall of the *Monashee Décollement* is rock of the Shuswap Metamorphic Complex (Selkirk Allochthon). This complex comprises a thick sequence of Late Proterozoic Windemere, Purcell and Kootenay terrane. It includes rocks of sedimentary, plutonic and volcanic origin predominantly within the sillimanite isograd. Lithologies include paragneiss, orthogneiss, quartz-mica schist and lesser amounts of marble, calc-silicate, and amphibolite. Abundant granitoid intrusions occur within the Shuswap Metamorphic Complex ranging from Devono-Mississippian to Eocene in age (Figure 3). These rocks are thought to have formed during accretion and subduction of allochthonous oceanic terranes (Brandon and Smith, 1994). One such intrusion referred to as the Anstey pluton, forms a sheared, metamorphosed elongate body situated west of the Tan and GQ properties. Radiometric dating for the Anstey pluton indicates a 92 to 94 Ma (mid Cretaceous) age.

LOCAL GEOLOGY

During the exploration on the Tan property, outcroppings and float occurrences were examined and documented. Logging roads, clearcuts and ridge tops often provided excellent bedrock exposures. Overburden thickness beyond the valley bottoms is quite thin.

Lithology:

The lithologies observed are quite diverse with several metamorphic and intrusive rock types present. Mapping by various authors indicates that the *Monashee Décollement* trends northerly through the western portion of the project area (Figure 3). The lithologies observed on the property and surrounding area consist predominantly of gneiss and quartzite with lesser amounts of schist, amphibolite, marble and calc-silicate gneiss.



Generalized geology of the Shuswap metamorphic complex and adjacent areas (modified after Wheeler and McFeely, 1991) showing locations of new intrusion-related gold prospects and granitoid intrusions. Adams-North Thompson fault (ANTF), Monashee decollement and Columbia River fault are after Parrish *et al.* (1988) and Johnson (1994). Sillimanite isograd is after Read *et al.* (1991)

After British Columbia Geological Survey (1999)

Figure: 3

The gneiss is generally a white to grey biotitic rock comprised of feldspar and quartz, with varying amounts of garnet. Some of this rock can be considered granite gneiss. Local boudinage structures of quartz and feldspar are not uncommon and likely reflect partial melting of these rocks. Found as locally thick units are quartzites ranging from white, grey-green to purplish in colour. Micaceous (muscovite) partings are common giving the rock a platy habit. One of the best exposures of this rock type is seen in the central part of the Tan 2 claim. Intercalated in the gneiss are lesser amounts of grey to red-brown quartz-biotite ± muscovite ± garnet schist. These rocks are usually fine grained, well foliated and may be locally folded, crumbly and weathered. Another rock seen on the property and throughout the region is amphibolite. This rock typically occurs as dark green to black, medium to coarse-grained bands up to several metres thick intercalated within gneiss, quartzite or schist. This rock can often be quite garnetiferous. The amphibolite is thought to represent metamorphosed mafic rich beds in original sedimentary sequence.

A relatively uncommon but distinct rock is marble that occurs as beds from several tens of centimeters to 3 metres or more in thickness. The rock is a milky white to grey-green colour and medium to coarse-grained. Flakes of silvery graphite are often disseminated through these rocks. Another uncommon but distinct rock is referred to as calc-silicate gneiss. This rock is comprised of varicoloured, fine to medium-grained bands. These rocks can occur as more irregular lenticular bodies. Their proximity to calcareous or marble units suggests a possible skarn association.

Intrusive rocks are scattered throughout the area and have several modes of occurrence. The largest area of intrusive rocks is found west of the property. The Anstey pluton is an elongate northerly trending body of Cretaceous age rock. These rocks are described as white to grey, medium to coarse-grained intrusives usually with biotite as the chief mafic mineral. Quartz content is usually >10% and there are garnetiferous zones. The closest example is seen in the southwest region of the GQ property. A foliated texture is not uncommon in the main body west of the Anstey River and attests to recent tectonic deformation.

Observed throughout the region is pegmatite. This rock is typically white to pale grey, coarse-grained and comprised of white Kspar, quartz and minor but coarse flakes of biotite and occasional muscovite. Locally these rocks contain red garnet and/or black elongate crystals of tourmaline. Pegmatite occurs as dykes and sills throughout the area and ranges from centimeters to several tens of metres wide. These rocks occur with increasing frequency further west and are especially common on parts of the GQ property. The origin of these rocks is likely both metamorphic (anatectic) and as late stage emanations from granitoid bodies. The youngest intrusive rocks are dark green, grey to brown, fine-grained, mafic (basaltic) dykes. The dykes cut all lithologies and range from a few centimeters to 1.5m+ wide and occasionally occur in clusters. Chill margins are often seen along the contacts. Mafic dykes most often strike north to north-northeast and dip steeply. Occasionally they appear to have been intruded along faults. Dykes are found in the Second and Third Creek valleys and have been observed north of the Tan property to Fifth Creek. A rather unusual rock observed near the eastern boundary of the claims is Sample T-04. Here a black, coarse, biotite rich dyke cuts gneissic rocks. The origin of this rock is unclear.

Found along a road cut in the west central part of the Tan 3 claim is *carbonatite*. The main showing consists of a pale brownish-grey, knobbly, weathered, medium-grained rock that appears similar to marble. Figure 5 is a detailed plan of the main showing. A petrographic report of the carbonatite is found in Appendix B. The carbonatite occurs within gneiss as a conformable sill(?) approximately 0.5 metres wide that can be traced in the road bank for 10 metres. An attitude for the carbonatite yields a strike of 174° and a 34° dip to the west. The footwall of the carbonatite is a crumbly, weathered, black micaceous zone 10 – 20 cm thick. Cutting the gneiss and carbonatite is a grey, fine-grained dyke approximately 0.5 metres wide that dips steeply east and strikes nearly north south. There is evidence of there being more than a single carbonatite. Approximately 450 metres south-southwest of the main showing, a narrow (0.1m) carbonatite with a biotite rich footwall was observed (T-19). The strike and dip of this unit are virtually identical to the main zone. The position and attitude suggest that this is a separate and likely parallel carbonatite band (Figure 6). Situated 290 metres northeasterly of the main showing are scattered boulders of carbonatite along a road. Since these are uphill, up-ice and not on strike with the main showing it also points to the presence of additional carbonatite bodies. Geochemical indications also support this view.

Structure:

Although quite variable, the metamorphic fabric of the schists and gneisses generally strikes from 160° to 195° and dips from 35° to 60° westerly. Strong variations in schistosity are locally observed however no large-scale fold structures are evident. Faulting and shearing are occasionally observed with orientations ranging from 165° to 215° and dips generally steep to the west or east. Faults cut all lithologies and some display distinct dip-slip displacement. Figure 4 shows several larger scale linears (faults) that transect the Tan property area. These structures parallel the general schistosity and may have played a role in the emplacement of the carbonatite intrusions (sills). The mafic dykes for the most part are thought to have been emplaced along near vertical north trending faults.

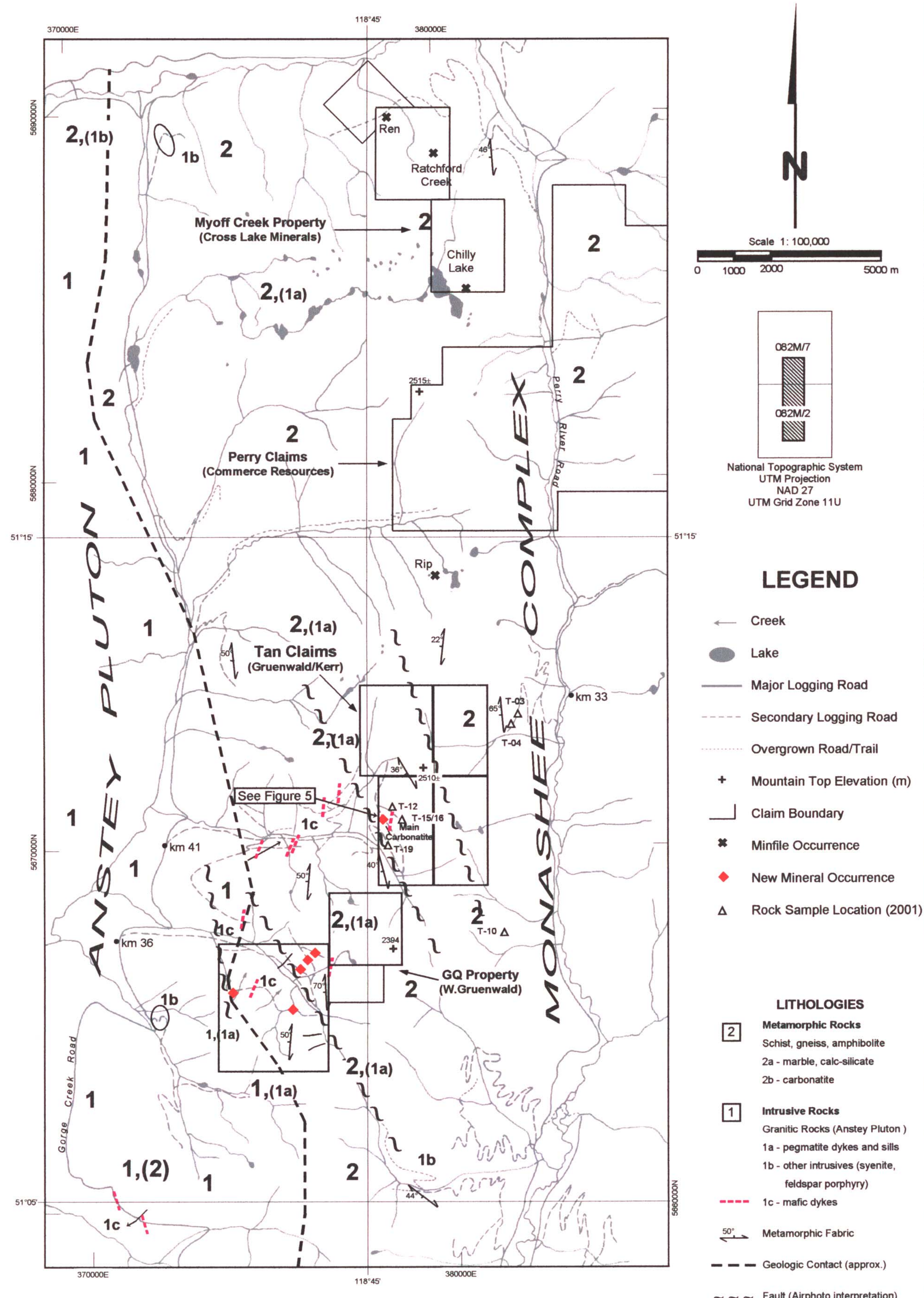
Alteration:

By far the most common form of alteration observed is limonite staining. Weathering of the ubiquitous and finely disseminated pyrrhotite in schist and gneiss often discolours many of these rocks. Pegmatitic rocks are occasionally limonitic whereas the granitoid bodies seldom display any significant limonite staining. On occasion, sericitic alteration is observed in some pegmatites and granitic dykes.

Mineralization:

According to Minfile records, there are four mineral occurrences indicated in the area (Figure 4). Situated just south of Ratchford Creek are two mineral occurrences known collectively as the ***Ren*** (Minfile #082M199). Rare earth (Ce, La, Nb, Nd) and base metal mineralization (Cu, Zn, Mo) are associated with north-northwest trending, concordant carbonatite sills and tuffs. Mapping by Journeay (1983) indicates that the Ren carbonatite layer extends to the southeast. Recently these occurrences have been explored by Cross Lake Minerals for their tantalum and rare earth (REE) potential. A news release dated July 26, 2001 reported the results of trenching of the Myoff Creek carbonatite sill. It stated that the carbonatite was trenched along a length of 410 metres and found to strike 150° and dip 35° west. Cross Lake also stated that the carbonatite horizon has a potential strike length of 12 kilometres. In the same news release the company reported, "the weighted average for the combined 276.8 metres of carbonatite trenched is 34.0 ppm Ta_2O_5; 1365.4 ppm Nb_2O_5; 345.5 ppm La_2O_5; 732 ppm Ce_2O_5 and 299.2 pp Nd_2O_5.

Situated approximately 1.5 km and 5.5 km south-southeast of the ***Ren*** are two kyanite occurrences referred to as ***Ratchford Creek*** and ***Chilly Lake***. The fourth mineral occurrence known as ***Rip*** (Minfile 082M027) is situated 8 km



TAN PROPERTY

Geological Plan—Anstey Range

NTS Map No.: 082M/02,07

PROFESSIONAL GEOSCIENTIST — PROVINCE OF BRITISH COLUMBIA — W. GRUENWALD

26791 M1

Figure: 4

south of the Chilly Lake occurrence. Molybdenite is described as disseminations in nepheline and pegmatite dykes that intrude biotite gneiss and schist.

The writer, while working on a Prospectors Assistance program in 1999, discovered five new mineral occurrences along new logging roads in Second Creek. Mineralization occurs in sulphide rich zones associated with calc-silicate rock near or adjacent to pegmatitic bodies. Sulphides consist of disseminations to semi-massive pyrrhotite with minor chalcopyrite and locally scheelite. Several of these showings contain gold in the 1 to 3 g/t range.

REGIONAL GEOPHYSICS

The claims are shown on an aeromagnetic base map for the Anstey Range (Figure 5A). Two magnetic patterns are evident. One is a broad north trending magnetic high straddling but primarily west of the Anstey River. This corresponds largely with the Anstey Pluton. The second notable feature is a north-south trending magnetic high that extends from the Ren carbonatite to the Tan property. The exact cause of this feature is unknown but is considered to be primarily lithologic.

EXPLORATION WORK – 2001

Exploration of the Tan property took place between September 6, 2001 and October 4, 2001. Work consisted of stream sampling, prospecting, and soil and rock sampling. Analytical data is found in Appendix A and plotted on a series of geochemical plans (Figures 6-9).

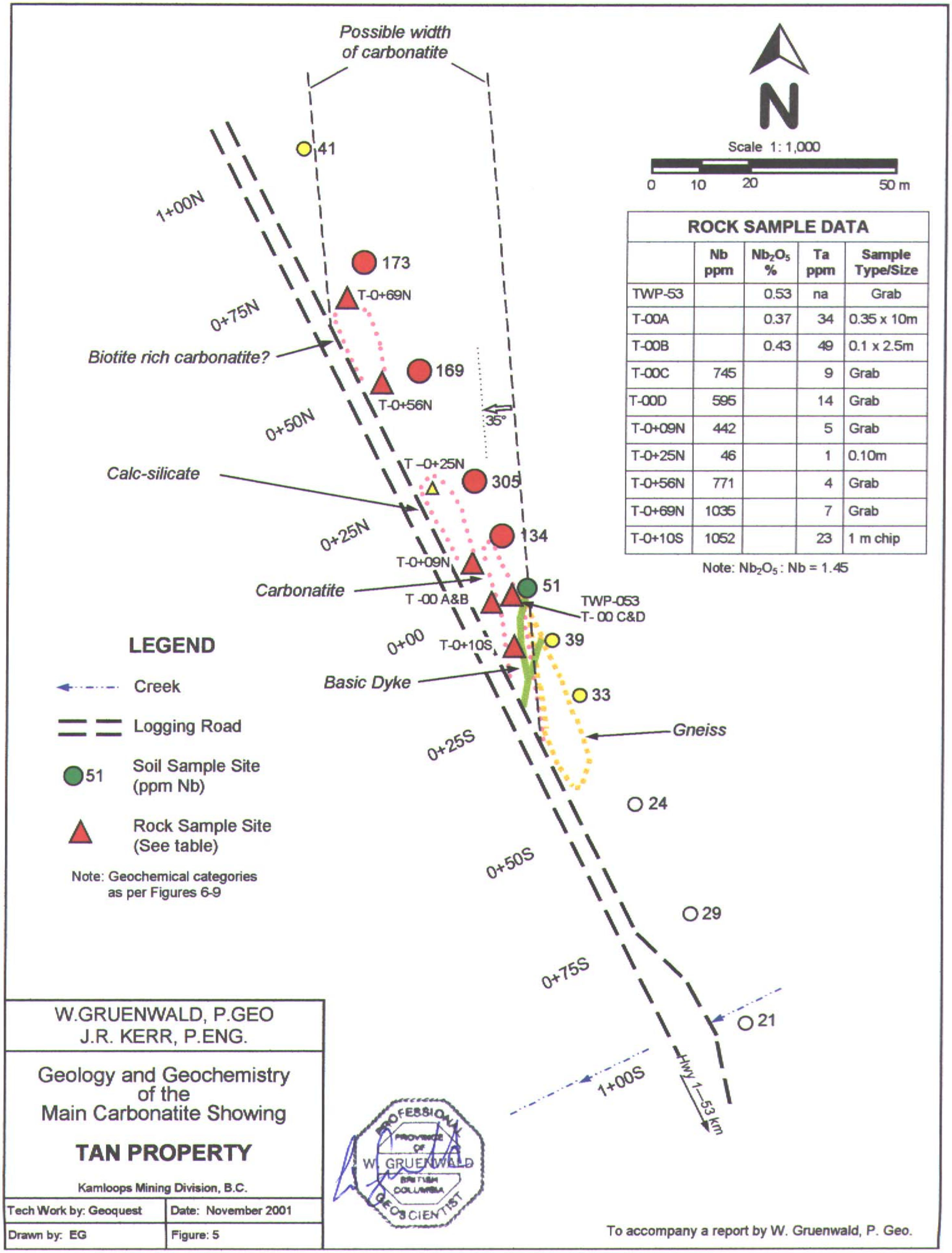
Stream Sampling:

A major component of the Tan property exploration was stream sampling. The objective was to follow-up anomalous samples from the 2000 program as well as increase sample density by testing smaller drainages.

Stream sediments were collected from the active portions of drainages and sieved to minus 10 mesh to yield a sample of approximately 400 – 500 grams. The coarse float was logged in the field to determine the lithologic components. Two full gold pans (12 to 15 kg) of hand-screened material were reduced to produce a concentrate weighing 15 to 25 grams. A total of 10 stream silt, and 9 panned concentrates were collected from the property. Stream silt samples were submitted to Bondar-Clegg Labs in Vancouver while panned concentrates were submitted to Activation Labs in Ancaster, Ontario.

Prospecting:

Logging roads provided numerous bedrock exposures in the Third Creek valley. A primary focus was on the carbonatite and otherwise suspicious bedrock and float. Representative hand specimens were collected for reference and petrographic work. In the main showing area "B" horizon soil was sampled along road cuts (Figure 5). A total



ROCK SAMPLE DATA

	Nb ppm	Nb_2O_5 %	Ta ppm	Sample Type/Size
TWP-53		0.53	na	Grab
T-00A		0.37	34	0.35 x 10m
T-00B		0.43	49	0.1 x 2.5m
T-00C	745		9	Grab
T-00D	595		14	Grab
T-0+09N	442		5	Grab
T-0+25N	46		1	0.10m
T-0+56N	771		4	Grab
T-0+69N	1035		7	Grab
T-0+10S	1052		23	1 m chip

Note: Nb_2O_5 : Nb = 1.45

W.GRUENWALD, P.GEO
J.R. KERR, P.ENG.

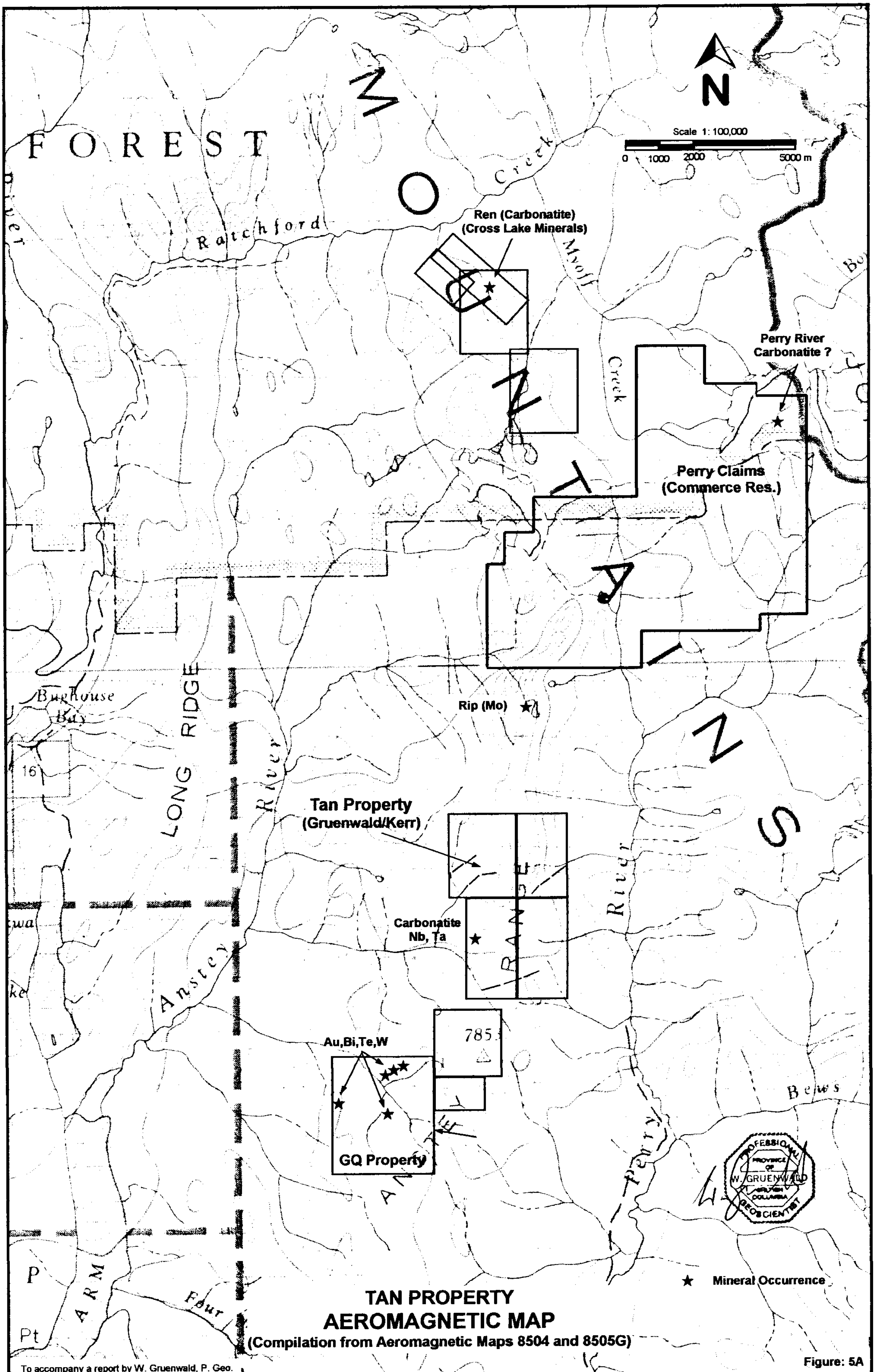
Geology and Geochemistry of the Main Carbonatite Showing

TAN PROPERTY

Kamloops Mining Division, B.C.

Tech Work by: Geoquest	Date: November 2001
Drawn by: EG	Figure: 5

To accompany a report by W. Gruenwald, P. Geo.



FOREST
MOUNTAINS
Scale 1: 100,000
0 1000 2000 5000 m
N
Ratchford Creek
Myoff Creek
Ren (Carbonatite)
(Cross Lake Minerals)
Perry River
Carbonatite ?
Perry Claims
(Commerce Res.)
Rip (Mo)
Bughouse Bay
16
LONG RIDGE
Anstey River
Tan Property
(Gruenwald/Kerr)
Carbonatite
Nb, Ta
RANGE
785
Au,Bi,Te,W
GQ Property
Perry River
Bews
ARM
Four
Pt
Mineral Occurrence
PROFESSIONAL
PROVINCE OF
W. GRUENWALD
BRITISH COLUMBIA
GEOSCIENTIST
TAN PROPERTY
AEROMAGNETIC MAP
(Compilation from Aeromagnetic Maps 8504 and 8505G)
To accompany a report by W. Gruenwald, P. Geo.
Figure: 5A

26791 a

of 21 rock and 15 soil samples were collected and submitted to Bondar-Clegg Labs in North Vancouver for analysis. Locations for the rock and soil samples are shown on Figures 6 – 9.

Sample Analysis:

The stream sediment and rock samples were analyzed for 34 elements using neutron activation. Panned concentrates were analyzed for a somewhat different suite of elements also using neutron activation. Soil samples were analyzed for niobium only.

Petrography:

Vancouver Petrographics conducted an analysis of one rock specimen collected from the main carbonatite showing. The complete report is contained in Appendix B.

RESULTS

The 2001 exploration work confirmed the presence of carbonatite on the Tan claims. Prospecting and sampling indicates that other carbonatites exist over a considerable area.

Stream Sampling:

The current program yielded a number of samples containing elevated rare earth elements and tantalum. These are described as follows:

Niobium:

The results indicate anomalous niobium in streams over a north south length of 3.5 kilometres (Figure 6). The highest values, up to 859 ppm, are associated with a stream in the northeast part of the property. Another stream sampled near the south boundary of the claim in 2000 also displays consistently anomalous niobium with the highest values being furthest upstream. The source of these anomalous values though undiscovered, points to an area near the height of land. In general the anomalous niobium coincides with anomalous tantalum, cerium and lanthanum.

Tantalum:

Tantalum anomalies roughly coincide with the anomalous niobium sites. There is currently no explanation for these anomalies although one or more carbonatites is suspected.

Cerium and Lanthanum:

The GQ property contains by far the greatest concentration of anomalous cerium stream samples. The abundance of pegmatitic and granitic rocks is likely the cause of the high cerium on the GQ property. On the Tan property there are several anomalous cerium and lanthanum sites. Those streams with anomalous cerium show a moderate coincidence with niobium, tantalum and lanthanum and may reflect a carbonatite source.

Panned Concentrates:

Analysis of panned concentrates yielded highly variable results. One sample (TPC 13) contains very anomalous amounts of cerium, lanthanum and neodymium. The REE content was in fact so high that it caused interference and raised the lower detection levels of many of the elements. Interestingly this sample came from a stream near mineralized carbonatite float (T-12). Near the northeast corner of the property, sample TPC-01 contained 250 ppb gold, a value that based on past exploration is considered highly anomalous for the region.

Soil Sampling:

Soil sampling in the area of the main carbonatite showing revealed anomalous niobium extending along the road and northerly for nearly 100 metres. Values range up to 305 ppm, well above the background level of under 40 ppm Nb. This demonstrates that soil sampling should be an effective means of exploring for additional carbonatite sources.

Rock Sampling:

Highly anomalous amounts of niobium were indicated in and around the main showing. A grab sample (WP 053) collected in 1999 returned a value of 172 ppm Nb. Detailed sampling in 2000 however indicates significantly greater niobium content. Samples collected during this program yielded substantially higher values with one sample of the main carbonatite assaying 0.53% Nb_2O_5. Sample T-00A, collected across 0.35 m and along a strike length of 10 metres, contains 0.37 % Nb_2O_5. Biotite rich material in bedrock and float along the road also contains highly anomalous amounts of niobium. The origin of this material is unclear. Sample T-19, situated 450 metres south-southwest of the main showing, is a narrow carbonatite with a biotite rich footwall zone. In this case a grab sample of the footwall material contained 546 ppm Nb. One of several pieces of carbonatite float found 290 metres northeast of the main showing contains 462 ppm Nb. The position of this float relative to the main showing indicates the presence of a separate carbonatite. It is apparent that carbonatite occurs and is inferred over a considerable area.

CONCLUSIONS AND RECOMMENDATIONS

The 2000 exploration program of the Tan property has confirmed the discovery of a new niobium bearing carbonatite. One sample from this zone was found to contain 0.53% Nb_2O_5. To date, stream sampling and prospecting has outlined a substantial area prospective for the discovery of additional carbonatite. Geochemical work has demonstrated that soil and stream sampling are effective exploration tools in the search for these rocks.

Although this was a very limited exploration program, the discoveries made thus far and the geologic setting demonstrate the potential for additional carbonatites. Cross Lake's Myoff Creek property to the north demonstrates that the carbonatites can be quite large. Further exploration of the Third Creek valley and the height of land are warranted and should include detailed geochemical sampling, prospecting and mapping. Geophysical surveys such as magnetics could also be employed to aid in the delineation of carbonatite zones.

Submitted by,

Warner Gruenwald, P. Geo.
November 15, 2001

APPENDIX A

ANALYTICAL DATA
and
METHODOLOGY

Geochemical Lab Report

BONDAR CLEGG

REPORT: V01-01809.0 (COMPLETE)

REFERENCE:

CLIENT: JOHN R. KERR & ASSOCIATES LTD.

PROJECT: TAN PROJECT

SUBMITTED BY: J.R. KERR

DATE RECEIVED: 17-SEP-01 DATE PRINTED: 2-OCT-01

DATE APPROVED	ELEMENT		NUMBER OF ANALYSES	LOWER DETECTION	EXTRACTION	METHOD
010920	1 Au	Au-NaO3Subcontractor	21	5 PPB	NOT APPLICABLE	NEUTRON ACTIVATION
010920	2 Ir	Ir-NAO3Subcontractor	21	100 PPB	NOT APPLICABLE	NEUTRON ACTIVATION
010920	3 Ag	Ag-NAO3Subcontractor	21	5 PPM	NOT APPLICABLE	NEUTRON ACTIVATION
010920	4 Zn	Zn-NAO3Subcontractor	21	200 PPM	NOT APPLICABLE	NEUTRON ACTIVATION
010920	5 Mo	Mo-NAO3Subcontractor	21	2 PPM	NOT APPLICABLE	NEUTRON ACTIVATION
010920	6 Ni	Ni-NAO3Subcontractor	21	20 PPM	NOT APPLICABLE	NEUTRON ACTIVATION
010920	7 Co	Co-NAO3Subcontractor	21	10 PPM	NOT APPLICABLE	NEUTRON ACTIVATION
010920	8 Cd	Cd-NAO3Subcontractor	21	10 PPM	NOT APPLICABLE	NEUTRON ACTIVATION
010920	9 As	As-NAO3Subcontractor	21	1 PPM	NOT APPLICABLE	NEUTRON ACTIVATION
010920	10 Sb	Sb-NAO3Subcontractor	21	0.2 PPM	NOT APPLICABLE	NEUTRON ACTIVATION
010920	11 Fe	Fe-NAO3Subcontractor	21	0.5 PCT	NOT APPLICABLE	NEUTRON ACTIVATION
010920	12 Se	Se-NAO3Subcontractor	21	10 PPM	NOT APPLICABLE	NEUTRON ACTIVATION
010920	13 Te	Te-NAO3Subcontractor	21	20 PPM	NOT APPLICABLE	NEUTRON ACTIVATION
010920	14 Ba	Ba-NAO3Subcontractor	21	100 PPM	NOT APPLICABLE	NEUTRON ACTIVATION
010920	15 Cr	Cr-NAO3Subcontractor	21	50 PPM	NOT APPLICABLE	NEUTRON ACTIVATION
010920	16 Sn	Sn-NAO3Subcontractor	21	200 PPM	NOT APPLICABLE	NEUTRON ACTIVATION
010920	17 W	W-NAO3Subcontractor	21	2 PPM	NOT APPLICABLE	NEUTRON ACTIVATION
010920	18 Cs	Cs-NAO3Subcontractor	21	1 PPM	NOT APPLICABLE	NEUTRON ACTIVATION
010920	19 La	La-NAO3Subcontractor	21	5 PPM	NOT APPLICABLE	NEUTRON ACTIVATION
010920	20 Ce	Ce-NAO3Subcontractor	21	10 PPM	NOT APPLICABLE	NEUTRON ACTIVATION
010920	21 Sm	Sm-NAO3Subcontractor	21	0.2 PPM	NOT APPLICABLE	NEUTRON ACTIVATION
010920	22 Eu	Eu-NAO3Subcontractor	21	2 PPM	NOT APPLICABLE	NEUTRON ACTIVATION
010920	23 Tb	Tb-NAO3Subcontractor	21	1 PPM	NOT APPLICABLE	NEUTRON ACTIVATION
010920	24 Yb	Yb-NAO3Subcontractor	21	5 PPM	NOT APPLICABLE	NEUTRON ACTIVATION
010920	25 Lu	Lu-NAO3Subcontractor	21	0.5 PPM	NOT APPLICABLE	NEUTRON ACTIVATION
010920	26 Sc	Sc-NAO3Subcontractor	21	0.5 PPM	NOT APPLICABLE	NEUTRON ACTIVATION
010920	27 Hf	Hf-NAO3Subcontractor	21	2 PPM	NOT APPLICABLE	NEUTRON ACTIVATION
010920	28 Ta	Ta-NAO3Subcontractor	21	1 PPM	NOT APPLICABLE	NEUTRON ACTIVATION
010920	29 Th	Th-NAO3Subcontractor	21	0.5 PPM	NOT APPLICABLE	NEUTRON ACTIVATION
010920	30 U	U-NAO3Subcontractor	21	0.5 PPM	NOT APPLICABLE	NEUTRON ACTIVATION
010920	31 Na	Na-NAO3Subcontractor	21	0.05 PCT	NOT APPLICABLE	NEUTRON ACTIVATION
010920	32 Br	Br-NAO3Subcontractor	21	1 PPM	NOT APPLICABLE	NEUTRON ACTIVATION
010920	33 Rb	Rb-NAO3Subcontractor	21	10 PPM	NOT APPLICABLE	NEUTRON ACTIVATION
010920	34 Zr	Zr-NAO3Subcontractor	21	500 PPM	NOT APPLICABLE	NEUTRON ACTIVATION
010920	35 Nb	Nb - XR01/A	10	2 PPM	Pressed Pellet	XRAY FLUORESCENCE

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
R ROCK	21	2 -150	21	CRUSH/SPLIT & PULV.	21
				RIVER ROCK CLEANING	21
				SILICA CLEANING	21

REPORT COPIES TO: MR. JOHN KERR

INVOICE TO: MR. JOHN KERR

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BONDAR CLEGG

Geochemical Lab Report

CLIENT: JOHN R. KERR & ASSOCIATES LTD. PROJECT: TAN PROJECT

REPORT: V01-01809.0 (COMPLETE) DATE RECEIVED: 17-SEP-01 DATE PRINTED: 2-OCT-01

SAMPLE NUMBER	ELEMENT	Au	Ir	Ag	Zn	Mo	Ni	Co	Cd	As	Sb	Fe	Se	Te	Ba	Cr	Sn	W	Cs	La	Ce	Sm	Eu	Tb	Yb	Lu	Sc	Hf	Ta	Th	U	Na	Br	Rb	Zr	Nb
	UNITS	PPB	PPB	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PCT	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PCT	PPM	PPM	PPM	PPM
T00AR		<5	<100	<5	<200	<2	<20	<10	<10	<1	0.4	3.6	19	<20	680	<50	<200	2	1	190	410	21.8	7	2	<5	<.5	1.5	<2	34	16.0	21.0	0.35	<1	45	<500	>1000
T00BR		<5	<100	<5	<200	<2	68	36	<10	<1	<0.2	10.0	33	<20	940	100	<200	<2	3	370	770	33.2	11	3	<5	0.8	8.1	10	49	60.0	24.0	1.80	2	83	<500	>1000
T00CR		<5	<100	<5	220	<2	330	150	<10	<1	<0.2	>10.0	<10	<20	1100	57	<200	<2	3	120	240	14.0	4	1	<5	<.5	27.0	9	4	1.4	0.9	0.54	<1	56	610	745
T00DR		<5	<100	<5	<200	2	<20	<10	<10	<1	<0.2	2.0	<10	<20	1200	86	<200	7	2	50	100	5.4	<2	<1	<5	0.5	1.3	4	14	11.0	25.0	3.50	<1	170	<500	595
T 0+09 NR		<5	<100	<5	<200	<2	<20	<10	<10	<1	<0.2	3.3	<10	<20	1100	93	<200	<2	3	160	280	14.0	5	1	<5	<.5	4.2	<2	5	5.5	7.0	2.50	2	60	<500	
T 0+25 NR		<5	<100	<5	540	4	38	19	<10	<1	<0.2	3.6	<10	<20	2000	160	<200	<2	4	49	100	7.2	2	<1	<5	<.5	13.0	6	1	24.0	3.8	2.10	4	110	<500	
T 0+56 NR		<5	<100	<5	<200	<2	<20	22	<10	<1	<0.2	7.3	<10	<20	990	50	<200	3	3	150	270	14.0	5	1	<5	<.5	8.6	4	4	3.6	2.9	0.41	<1	59	<500	
T 0+69 NR		<5	<100	<5	<200	<2	<20	11	<10	<1	<0.2	6.6	<10	<20	790	74	<200	<2	<1	75	140	9.2	4	<1	<5	<.5	20.0	4	7	3.5	4.8	1.70	<1	19	<500	
T 0+10 SR		<5	<100	<5	<200	<2	<20	28	<10	<1	<0.2	7.1	15	<20	420	74	<200	<2	<1	220	460	25.7	9	2	<5	<.5	11.0	7	23	36.0	8.3	0.72	<1	18	<500	
WP111R		<5	<100	<5	<200	7	76	36	<10	<1	<0.2	7.5	<10	<20	<100	140	<200	4	8	92	190	10.0	<2	1	<5	<.5	5.0	5	2	22.0	3.5	0.45	3	12	<500	
TR03		<5	<100	<5	210	<2	120	54	<10	<1	<0.2	8.5	<10	<20	280	370	<200	<2	2	20	24	3.8	<2	<1	<5	<.5	44.0	<2	<1	1.0	1.6	1.70	<1	89	<500	
TR04		<5	<100	<5	340	<2	700	85	<10	<1	<0.2	10.0	<10	<20	200	810	<200	2	6	100	220	14.0	3	<1	<5	<.5	25.0	8	7	13.0	3.6	0.50	<1	270	<500	
TR10		<5	<100	<5	<200	<2	49	20	<10	<1	1.6	3.5	<10	<20	2000	120	<200	2	3	41	71	4.8	<2	<1	<5	<.5	16.0	3	1	12.0	4.1	0.56	<1	120	<500	
TR12A		<5	<100	<5	<200	<2	<20	<10	<10	<1	<0.2	<0.5	<10	<20	270	<50	<200	<2	<1	<5	<10	0.8	<2	<1	<5	<.5	0.9	<2	<1	5.7	0.9	0.25	<1	<10	<500	17
TR12B		<5	<100	<5	<200	<2	<20	<10	<10	<1	<0.2	0.6	<10	<20	590	<50	<200	<2	<1	8	16	1.3	<2	<1	<5	<.5	2.4	<2	<1	4.1	1.6	0.32	<1	18	<500	25
TR12C		<5	<100	<5	<200	<2	<20	<10	<10	<1	<0.2	3.3	<10	<20	2000	72	<200	<2	3	160	250	11.0	<2	1	<5	<.5	3.8	11	6	7.7	13.0	3.70	<1	140	830	462
TR15		<5	<100	<5	<200	<2	37	15	<10	<1	0.2	>10.0	<10	<20	<100	65	<200	22	<1	210	310	8.5	3	<1	<5	<.5	13.0	2	3	13.0	4.1	0.09	<1	<10	<500	
TR16		<5	<100	<5	<200	<2	<20	<10	<10	<1	<0.2	2.2	<10	<20	1500	<50	<200	<2	5	110	190	10.0	<2	<1	<5	<.5	3.6	3	2	3.5	6.8	1.60	<1	130	<500	202
TR19A		<5	<100	<5	<200	<2	20	<10	<10	<1	<0.2	1.9	<10	<20	1100	<50	<200	<2	3	28	53	3.5	<2	<1	<5	<.5	7.1	<2	<1	14.0	1.1	1.70	<1	54	<500	27
TR19B		<5	<100	<5	<200	<2	<20	41	<10	<1	11.0	8.1	<10	<20	520	58	<200	<2	2	86	260	10.0	3	<1	<5	<.5	16.0	7	11	5.1	10.0	1.50	<1	37	510	546
TR21		<5	<100	<5	<200	<2	<20	<10	<10	10	75.7	1.0	<10	<20	750	<50	<200	<2	<1	16	21	1.8	<2	<1	<5	<.5	2.3	<2	<1	16.0	1.8	0.33	4	27	<500	

BONDAR CLEGG

Geochemical Lab Report

CLIENT: JOHN R. KERR & ASSOCIATES LTD. PROJECT: TAN PROJECT

REPORT: V01-01814.0 (COMPLETE) DATE RECEIVED: 17-SEP-01 DATE PRINTED: 2-OCT-01

SAMPLE NUMBER	ELEMENT UNITS	Au PPB	Ir PPB	Ag PPM	Zn PPM	Mo PPM	Ni PPM	Co PPM	Cd PPM	As PPM	Sb PPM	Fe PCT	Se PPM	Te PPM	Ba PPM	Cr PPM	Sn PPM	W PPM	Cs PPM	La PPM	Ce PPM	Sm PPM	Eu PPM	Tb PPM	Yb PPM	Lu PPM	Sc PPM	Hf PPM	Ta PPM	Th PPM	U PPM	Na PCT	Br PPM	Rb PPM	Zr PPM
T 0+00		<5	<100	<5	<200	3	<20	<10	<10	3	0.2	4.0	<10	<20	540	<50	<200	<2	4	72	170	9.2	3	<1	<5	<.5	9.1	13	3	25.0	5.6	1.20	6	130	<500
T 0+12✓		<5	<100	<5	<200	<2	<20	<10	<10	2	0.2	3.1	<10	<20	620	<50	<200	<2	3	65	150	8.2	3	<1	<5	<.5	7.9	10	2	23.0	4.6	1.50	2	100	<500
T 0+25✓		<5	<100	<5	<200	<2	<20	<10	<10	3	0.2	3.2	<10	<20	490	<50	<200	<2	5	72	160	9.3	2	<1	<5	<.5	8.4	11	2	24.0	4.5	1.40	5	92	<500
T 0+50✓		<5	<100	<5	<200	<2	22	<10	<10	<1	<.2	1.9	<10	<20	600	59	<200	<2	3	92	180	12.0	<2	1	<5	<.5	7.2	10	2	36.0	5.4	1.30	2	70	<500
T 0+75✓		<5	<100	<5	<200	<2	<20	<10	<10	2	0.3	2.8	<10	<20	620	53	<200	2	4	75	160	10.0	<2	<1	<5	<.5	8.0	10	2	25.0	4.6	1.10	4	110	570
T 1+00✓		<5	<100	<5	<200	<2	<20	<10	<10	2	0.3	2.8	<10	<20	560	<50	<200	<2	5	57	120	7.9	2	<1	<5	<.5	7.0	9	1	19.0	3.8	1.50	4	69	<500
T 0+12S✓		<5	<100	<5	<200	<2	<20	15	<10	2	<.2	4.6	<10	<20	530	52	<200	<2	5	90	200	12.0	2	<1	<5	<.5	11.0	9	4	24.0	6.6	1.20	7	120	<500
T 0+25S✓		<5	<100	<5	<200	<2	60	29	<10	2	<.2	7.1	<10	<20	690	130	<200	<2	6	130	340	15.0	3	2	<5	<.5	16.0	9	10	28.0	12.0	0.88	11	190	750
T 0+50S✓		<5	<100	<5	<200	<2	<20	17	<10	2	<.2	5.2	<10	<20	560	67	<200	<2	4	97	260	11.0	<2	1	<5	<.5	11.0	10	5	23.0	7.8	1.10	8	96	<500
T 0+75S✓		<5	<100	<5	<200	<2	59	20	<10	1	<.2	5.6	<10	<20	620	94	<200	<2	7	130	330	15.0	4	2	<5	0.7	12.0	9	8	34.0	10.0	1.70	10	150	<500
T 1+00S✓		<5	<100	<5	<200	<2	50	<10	<10	<1	<.2	2.4	<10	<20	700	79	<200	2	2	99	200	14.0	2	2	<5	<.5	10.0	13	2	29.0	5.8	1.20	3	66	<500
T21 0+00		<5	<100	<5	<200	<2	<20	<10	<10	<1	<.2	3.2	<10	<20	510	75	<200	<2	4	91	200	11.0	2	1	<5	<.5	10.0	11	2	25.0	7.5	1.00	10	68	570
T21A 0+25S		<5	<100	<5	<200	<2	35	10	<10	<1	<.2	3.1	<10	<20	650	62	<200	<2	3	110	240	13.0	<2	1	<5	<.5	10.0	14	5	36.0	8.1	1.60	7	120	<500
T21B 0+25S		<5	<100	<5	<200	<2	<20	14	<10	2	<.2	3.6	<10	<20	620	67	<200	<2	3	110	250	14.0	2	2	<5	<.5	11.0	13	3	31.0	10.0	1.20	16	81	<500
T21 0+50S		<5	<100	<5	<200	<2	<20	15	<10	<1	<.2	3.7	<10	<20	450	52	<200	<2	3	110	290	15.0	<2	2	<5	0.5	11.0	12	2	32.0	11.0	1.00	12	62	640
TSL01		<5	<100	<5	<200	<2	<48	17	<10	2	<.2	6.3	<10	<20	640	140	<200	<5	3	270	550	30.9	5	4	15	2.2	20.0	140	14	55.8	28.0	1.60	1	130	5400
TSL02		<5	<100	<5	<200	<2	39	<10	<10	1	<.2	3.8	<10	<20	660	<50	<200	<2	2	73	170	15.0	2	3	16	2.3	15.0	99	5	17.0	11.0	1.80	3	130	3100
TSL05		<5	<100	<5	<200	3	<20	11	<10	2	0.2	3.6	<10	<20	510	56	<200	<2	3	100	200	18.0	3	3	10	1.5	12.0	46	6	22.0	15.0	1.70	8	110	1600
TSL06		<5	<100	<5	<200	<2	41	<10	<10	2	<.2	3.9	<10	<20	650	82	<200	<2	4	180	380	21.6	4	3	8	1.3	13.0	37	7	29.0	15.0	1.40	6	110	1500
TSL07		<5	<100	<5	<200	<2	<20	<10	<10	2	<.2	3.7	<10	<20	790	98	<200	<2	1	240	490	30.1	7	3	<5	0.7	17.0	20	16	56.2	18.0	1.00	2	55	900
TSL08		14	<100	<5	210	<2	<20	11	<10	2	<.2	4.2	<10	<20	630	75	<200	4	3	150	300	20.0	3	3	10	1.5	13.0	45	7	24.0	36.0	1.70	10	110	2000
TSL09		<5	<100	<5	<200	<2	52	12	<10	<1	<.2	5.9	<10	<20	710	81	<200	<2	3	170	370	29.2	<2	5	18	2.8	19.0	120	7	45.0	20.0	1.80	2	120	4100
TSL13		<5	<100	<5	<200	<2	42	13	<10	<2	<.2	5.2	<10	<20	1500	180	<200	<5	4	848	1210	33.7	<4	3	<5	0.9	18.0	9	2	61.6	9.1	2.20	11	99	<500
TSL14		<5	<100	<5	<200	<2	45	12	<10	2	<.2	3.9	<10	<20	700	84	<200	<2	4	84	190	14.0	<2	2	<5	0.5	11.0	12	2	28.0	8.6	0.77	6	71	580
TSL15		<5	<100	<5	<200	<2	<20	13	<10	1	<.2	3.3	<10	<20	610	54	<200	<2	4	73	170	11.0	<2	1	<5	0.5	10.0	10	2	21.0	5.8	0.76	10	69	<500
TSL17		<5	<100	<5	<200	<2	<20	11	<10	<1	<.2	3.4	<10	<20	680	74	<200	3	3	180	380	24.4	4	3	<5	0.9	14.0	22	4	47.0	13.0	1.20	5	74	820
TSL18		<5	<100	<5	<200	<2	<20	21	<10	<1	<.2	3.3	<10	<20	740	90	<200	<2	4	120	250	18.0	2	2	<5	0.6	13.0	20	2	39.0	8.0	0.80	3	120	680
TSL20		92	<100	<5	<200	<2	24	15	<10	<1	<.2	3.7	<10	<20	680	58	<200	<2	3	120	250	19.0	<2	2	<5	0.6	11.0	11	2	38.0	10.0	0.86	5	69	580

BONDAR CLEGG

CLIENT: JOHN R. KERR & ASSOCIATES LTD.
PROJECT: TAN PROJECT
REPORT: V01-01814.1 (COMPLETE)
DATE RECEIVED: 12-OCT-01
DATE PRINTED: 24-OCT-01
PAGE 1 OF 1

SAMPLE NUMBER	ELEMENT UNITS	Mo PPM
S1 T 0+00		51
S1 T 0+12S		39
S1 T 0+25S		33
S1 T 0+50S		24
S1 T 0+75S		29
S1 T 1+00S		21
S1 T 0+12N		134
S1 T 0+25N		305
S1 T 0+50N		169
S1 T 0+75N		173
S1 T 1+00N		41
S1 T21 0+00		50
S1 T21A 0+25S		51
S1 T21B 0+25S		52
S1 T21 0+50S		62
T1 TSL01		15
T1 TSL02		37
T1 TSL05		125
T1 TSL06		241
T1 TSL07		440
T1 TSL08		198
T1 TSL09		55
T1 TSL13		95
T1 TSL14		22
T1 TSL15		24
T1 TSL17		35
T1 TSL18		21
T1 TSL20		18

BONDAR CLEGG

CLIENT: JOHN R. KERR & ASSOCIATES LTD. PROJECT: TAN PROJECT
REPORT: V01-01809.2 (COMPLETE) DATE RECEIVED: 12-OCT-01 DATE PRINTED: 23-OCT-01 PAGE 1 OF 1

SAMPLE NUMBER	ELEMENT UNITS	Nb PPM	Nb PPM
R2 T 0+09 NR		442	
R2 T 0+25 NR		46	
R2 T 0+56 NR		771	
R2 T 0+69 NR		>1000	1035
R2 T 0+10 SR		>1000	1052
R2 TR04		90	

BC BONDAR CLEGG

Geochemical Lab Report

REPORT: V01-01809.1 (COMPLETE) REFERENCE:

CLIENT: JOHN R. KERR & ASSOCIATES LTD. SUBMITTED BY: J.R. KERR

PROJECT: TAN PROJECT DATE RECEIVED: 09-OCT-01 DATE PRINTED: 12-OCT-01

DATE APPROVED	ORDER	ELEMENT		NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
011011	1	Nb205	IC51 - Nb205	3	0.01 PCT		INDUC. COUP. PLASMA
011011	2	Ta205	IC51 - Ta205	3	0.01 PCT		INDUC. COUP. PLASMA

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
R ROCK	3	2 -150	3	CRUSH/SPLIT & PULV.	1
				RIVER ROCK CLEANING	1
				SILICA CLEANING	1

REMARKS: Please note that the Nb & Ta results were reported in %Nb205 and %Ta205. The standard reported has an expected value of 1.36% Nb205 and 2.49% Ta205.

REPORT COPIES TO: MR. JOHN KERR INVOICE TO: MR. JOHN KERR

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BC BONDAR CLEGG

Geochemical Lab Report

CLIENT: JOHN R. KERR & ASSOCIATES LTD.　　PROJECT: TAN PROJECT

REPORT: V01-01809.1 (COMPLETE)　　DATE RECEIVED: 09-OCT-01　　DATE PRINTED: 12-OCT-01　　

SAMPLE NUMBER	ELEMENT UNITS	Nb2O5 PCT	Ta2O5 PCT
R2 T00BR		0.43	<0.01
R2 T00AR		0.37	<0.01
R2 TWP53		0.53	<0.01

Bondar Clegg Canada Limited
130 Pemberton Avenue, North Vancouver, BC, V7P 2R5, Canada
Tel: (604) 985-0681, Fax: (604) 985-1071

BC BONDAR CLEGG

Geochemical Lab Report

CLIENT: JOHN R. KERR & ASSOCIATES LTD. PROJECT: NONE GIVEN

REPORT: V01-02076.0 (COMPLETE) DATE RECEIVED: 16-OCT-01 DATE PRINTED: 22-OCT-01

SAMPLE NUMBER	ELEMENT UNITS	Nb PPM
S1 TSL-21		41

Bondar Clegg Canada Limited
130 Pemberton Avenue, North Vancouver, BC, V7P 2R5, Canada
Tel: (604) 985-0681, Fax: (604) 985-1071

Activation Laboratories Ltd. Work Order: 23121 Report: 22920

Sample ID	Au ppb	Ag ppm	As ppm	Ba ppm	Br ppm	Ca %	Co ppm	Cr ppm	Cs ppm	Fe %	Hf ppm	Hg ppm	Ir ppb	Mo ppm
TCP-01	250	-5	-2	1400	-5	-3	15	126	-2	18.9	450	-5	-50	-20
TCP-02	20	-5	-2	1000	-5	-2	10	56	-2	6.39	168	-5	-50	-20
TCP-05	5	-5	-2	1200	-5	-2	20	115	-2	8.5	250	-5	-50	-20
TCP-07	15	-5	-2	-200	-5	-3	22	144	-2	20.5	174	-5	-50	-20
TCP-09	20	-5	-2	-200	-5	-5	15	91	-2	24	600	-5	-50	-20
TCP-13	-70	-49	-11	-1200	-10	-21	-17	-67	-11	10.9	54	-20	-50	-20
TCP-14	-5	-5	-2	740	-5	-1	18	139	-2	15.6	25	-5	-50	-20
TCP-17	-5	-5	-2	-200	-5	-2	11	104	-2	10.1	39	-5	-50	-20
TCP-20	24	-5	-2	1100	-5	-2	18	104	-2	14.1	44	-5	-50	-20
DMMAS-18-2085	665	-5	2070	440	-5	8	62	150	-2	8.41	3	-5	-50	-20
Accepted Value-DMMAS-18B	544+-72		2020+-224	435+-150	2.5+-1.5	7+-2	58+-15	151+-20		8.05+-0.86	2+-1			

Sample ID	Na %	Ni ppm	Rb ppm	Sb ppm	Sc ppm	Se ppm	Sr %	Ta ppm	Th ppm	U ppm	W ppm	Zn ppm	La ppm	Ce ppm	Nd ppm
TCP-01	1	-200	201	-0.2	34.7	-20	-0.2	42	172	79.9	43	325	917	1240	359
TCP-02	2	-200	-50	-0.2	24.2	-20	-0.2	7	102	18.2	-4	-200	460	722	191
TCP-05	2	-200	-50	-0.2	27.5	-20	-0.2	33	152	50.6	-4	-200	441	729	254
TCP-07	1	703	-50	-0.2	43.1	-20	-0.2	85	275	99.9	30	-200	912	1410	445
TCP-09	1	-285	-52	-0.4	42.7	-20	-0.2	20	298	82.6	41	-200	1260	1740	521
TCP-13	1	-1380	-241	-1.8	54.6	-41	-0.3	-18	295	61.7	-18	-464	8880	8380	2970
TCP-14	1	-200	71	-0.2	34.5	-20	-0.2	6	86.8	17.6	11	-200	290	494	168
TCP-17	1	-200	-50	-0.2	40.6	-20	-0.2	14	157	38	37	-200	561	850	288
TCP-20	1	-200	-50	-0.2	51.5	-20	-0.2	18	120	54.6	11	-200	275	442	154
DMMAS-18-2085	1	-200	-50	0.9	23.2	-20	-0.2	-1	2	-0.5	20	330	14	27	23
Accepted Value-DMMAS-18B	0.74+-0.48		38+-10	12+-3	20.5+-3.4				1.5+-0.5		19+-2	250+-50	12.2+-1.3	23+-3	11+-3

Sample ID	Sm	Eu	Tb	Yb	Lu	Mass
	ppm	ppm	ppm	ppm	ppm	g
TCP-01	58.6	11.2	6	39	6.4	20.31
TCP-02	36.7	3.8	6	35.4	5.6	15.04
TCP-05	49.1	9.4	7	42.1	6.5	17.74
TCP-07	83.3	20.4	9	18.7	3.1	20.44
TCP-09	87.8	9.5	18	80.6	12.4	20.23
TCP-13	264	24.4	10	27.2	4	9.49
TCP-14	36.9	5.4	5	21.6	3.2	15.01
TCP-17	61.7	8.5	8	22.9	3.6	19.45
TCP-20	30.9	4.8	4	25.6	3.8	18.29
DMMAS-18-2085	4.3	1.3	-2	3.9	0.6	25.09
Accepted Value-DMMAS-18B	4.1+-0.5	1.2+-0.2	0.8+-0.35	3.6+-0.6	0.54+-0.05	

MDINAA : General Description for Instrumental Neutron Activation Analysis (Subcontracted)

SCOPE :

Instrumental neutron activation analysis (INAA) is especially powerful in its sensitivity and throughput and in its capacity to accurately determine many elements on a single sample. INAA does not require chemical treatments of samples with their attendant possibilities of losses and contamination and incomplete dissolution.

PRINCIPLE :

For stream sediments and soil samples, the neutron activation analysis method involves the transfer of the sample material to tared, plastic, water-tight vials of 2.5,15 or 45 ml capacity. (We do not recommend analysis of samples less than one gram in weight.) Note that the weight of the sample analyzed depends upon the packing density of the sample material. Each vial is identified with a bar code and also has a flux monitor affixed to the base.

The vials are stacked into one foot long bundles and the bundles are submitted for exposure to a flux of neutrons at a nuclear reactor. These bundles are inserted into the core of a nuclear reactor for a short period of time. In the RIFLS reactor sites, the bundles are rotated during irradiation so that there is no horizontal flux variation. This irradiation causes many of the elements in the sample to become radioactive and begin to emit radiation in the form of penetrating gamma rays whose energies (or wavelengths) are characteristic of particular elements.

After an appropriate decay period, the irradiated samples are loaded onto the counting system. There the sample weight and the sample I.D. are verified before the sample is placed close to a gamma-ray spectrometer with a high resolution, coaxial Germanium detector. Gamma rays radiate continuously and the interaction of these with the detector lead to discrete voltage pulses proportional in height to the incident gamma-ray energies. Our specially developed multichannel analyzer system sorts out the voltage pulses from the detector according to their size and digitally constructs a spectrum of gamma-ray energies versus intensities. The counting time varies from one to thirty minutes per sample, depending upon the analysis. By comparing spectral peak positions and areas with library standards, the elements comprising the samples are qualitatively and quantitatively identified. The results of the analysis are computed and data reports are generated. In addition Bondar Clegg QC protocol requires Bondar Clegg to insert one reference standard and analytical repeat per 30 samples. This internal QC must pass established tolerances before the report is approved by authorized personnel and issued to the client.

Note: Both thermal and epithermal irradiation is used depending upon the nature of the sample and the elements of interest. For example, thermal irradiation can be used for low activity materials such as vegetation and this improves the sensitivity for most elements. However, iron, scandium and sodium levels are often significant in rocks and sediment samples, and their gamma rays elevate the spectral background so that the peak definition is poorer. Epithermal irradiation is used to provide better gold analysis [1]. Epithermal irradiation reduces the overall activity and improves the peak to background resolution because the gold cross-section is 15 times higher epithermally than thermally. As well, these samples are safer to handle because of the lower activity.

1. Reference: Stuart,D.C., and Ryan,D.E., "Epithermal neutron activation analysis with a Slowpoke nuclear reactor", Canadian Journal of Chemistry, Vol. 59, No. 10, 1981, p. 1470-1475.

PRECISION:

Expected Tolerance	
Method Detection Limit (MDL)	± 100%
10 x MDL	± 20%
>10 x MDL	± 6%

APPENDIX B

PETROGRAPHIC REPORT

Vancouver Petrographics Ltd.

8080 GLOVER ROAD, LANGLEY, B.C. V3A 4P9
PHONE (604) 888-1323 • FAX (604) 888-3642

webpage: www.members.home.net/vanpetro

Report 010576 for

John R. Kerr,
John R. Kerr & Associates,
1702 - 438 Seymour Street,
Vancouver, B.C., V6B 6H4

September, 2001

Sample: TWP-53 Carbonatite from Shushwap Complex

Summary:

Sample TWP-53 is a medium to coarse grained carbonatite dominated by calcite with disseminated apatite, tremolite, phlogopite, columbite, and pyrrhotite, and minor pyrite, garnet, and scheelite. A moderate foliation is defined by elongation of mafic grains.

John G. Payne, Ph.D.,
Tel: (604)-597-1080
Fax: (604)-597-1080 (call first)
email: jgpayne@telus.net

Sample TWP-53 Carbonatite: Calcite-(Apatite-Tremolite-Phlogopite-Columbite)

The sample is a medium to coarse grained carbonatite dominated by calcite with disseminated apatite, tremolite, phlogopite, columbite, and pyrrhotite, and minor pyrite, garnet, and scheelite. A moderate foliation is defined by elongation of mafic grains.

mineral	percentage	main grain size range (mm)	
calcite	82-85%	0.5-2	
apatite	5- 7	0.5-1.7	(a few up to 2 mm long)
tremolite	3- 4	0.5-2	
phlogopite	2- 3	0.3-1.5	(one grain 3.5 mm long)
columbite	1- 2	0.3-1.2	
pyrrhotite	1	0.1-0.3	
pyrite	0.3	0.2-0.7	
Na-amphibole	0.1	0.05-0.1	
garnet	minor	0.35	
scheelite	trace	0.35	
chalcopyrite	trace	0.01-0.02	

Calcite forms anhedral, slightly to locally moderately interlocking grains.

Apatite forms equant to prismatic grains, many of which have well rounded outlines.

Phlogopite forms anhedral flakes intergrown coarsely with calcite. The mineral is pale to light brown in colour with weak pleochroism.

Tremolite forms anhedral to subhedral, colourless, equant to prismatic grains. A few contain irregular patches up to 0.1 mm in size of a Na-amphibole with pleochroism from light to medium greenish to grayish blue. Many of these patches are along the margins of grains. They give the amphibole grains containing them a nearly black colour in the hand sample.

Columbite forms anhedral, commonly poikilitic grains intergrown with calcite, either alone, in clusters of a few grains. It is pleochroic from medium blood red to dark blood-red and nearly opaque. Anisotropism in reflected light is weak to moderate. Hardness is 5. Some grains are associated with tremolite and phlogopite. It also contains 1-3% disseminated inclusions of garnet. Although reference books list columbite as being opaque, the deep red colour has been described for tantalite, the other end member of the columbite-tantalite solid solution series, and it is probable that this colour extends to some varieties of columbite (itself containing a solid solution series between Fe and Mn).

Pyrrhotite forms disseminated, equant, interstitial grains and a few patches up to 1 mm long of a few grains. Some are altered slightly on their margins to secondary pyrite and/or hematite.

Pyrite forms disseminated anhedral grains. Some subhedral to euhedral grains from 0.03-0.1 mm in size are intergrown with pyrrhotite.

Scheelite forms one rounded grain.

Garnet forms one rounded, pale orange grain intergrown with calcite. It also occurs in two columbite porphyroblasts as disseminated, minor to moderately abundant grains (0.03-0.1 mm).

Chalcopyrite forms minor grains associated with pyrite and pyrrhotite.

APPENDIX C

TAN PROPERTY SAMPLING

Location Number	Sample Type	UTM Coordinates Easting	UTM Coordinates Northing	Samples Collected	Description
T-01	Creek	381773	5674735	TPC and TSL	~25% garnets, low opaques, minor apatite, kyanite. Float: gneiss, minor pegmatite, marble.
T-02	Creek	381771	5674481	TPC and TSL	Moderate garnet and black sand, minor zircon, 10% intrusives, mainly gneiss.
T-03	Outcrop	381520	5673387	TR	Chip/1.3 meter - across full width of biotite rich shear and basic dyke. Strike- 165°; Dip- 65° west.
T-04	Outcrop	380940	5673387	TR	Chip/1.5m - across width biotite-rich dyke. Strike- 010°; Dip-steeply west.
T-05	Creek	380940	5672745	TPC and TSL	Small seep, limited boulders gneiss/quartzite. Moderate garnet, minor zircon.
T-06	Creek	380567	5672750	TS	Mainly gneiss, minor pegmatite (south tributary).
T-07	Creek	380532	5672824	TPC and TS	Gneiss, minor pegmatite and possible syenite. Low garnet and opaques; moderate zircon.
T-08	Creek	380580	5672907	TSL	South flowing tributary; dominant gneiss boulders
T-09	Creek	382503	5670807	TPC and TSL	180 m west of Perry River road. Boulders mainly gneiss and quartzite and pegmatite, possible marble. Low garnet, moderate zircon, high opaques.
T-10	Outcrop	381561	5667553	TR	Chip/0.1 meter. Lens of marble with small seams of sulphide-rich basic dyke
T-12	Float	378447	5670993	TR	Considerable float carbonatite. Sample A- low mafics; Sample B- moderate biotite; Sample C - high content of biotite and other mafics
T-13	Creek	378487	5670968	TPC and TSL	Mainly gneiss, minor quartzite and pegmatite; High garnet - coarse crystals.
T-14	Creek	378907	5670610	TPC and TSL	Much variation boulders; gneiss, schist, quartzite, pegmatite, vein and aplite. Apatite, monazite?, garnet; low opaques.
T-15	Creek	378777	5670723	TSL and TR	Gneiss, schist, calc silicate. Chip sample calc-silicate boulder
T-16	Float	378573	5670756	TR	5-6 boulders of carbonatite in overcast of road at switchback. Moderate mafics
T-17	Creek	378339	5672553	TSL and TPC	Dominant gneiss, minor quartzite and pegmatite. Large west flowing creek from divide. High garnet; low opaques. Monazite, apatite, zirconium and kyanite noted.
T-18	Dry Creek	378169	5671838	TSL	Collection from three drainages in ditch.
T-19	Outcrop	378087	5670325	TR	Carbonatite body exposed in road-cut. Size cannot be determined as outcrop follows road. Moderate to high mafics, mainly biotite. Sample 19A - chip/ 0.1 meter carbonatite; Sample 19B - grab biotite-rich zone. Strike – 170°; Dip – 40° west.
T-000	Outcrop	In area of WP 053		Rocks - 9 Soils - 11	All "B" horizon, collected at top of road bank
T-20	Creek	378523	5670376	TSL and TPC	Same creek as T-14, 460 m downstream. Gneiss, calc-silicate, possible carbonatite. Mainly garnet, some sphene, zircon and minor black opaques
T-21	Soil			Soils - 4	South projection of main carbonatite, ~300 meters from main showing. Soils taken along road across projected strike.

TPC – panned concentrate sample TSL – silt sample TR – rock sample

APPENDIX D

PERSONNEL

FIELD DAYS:

W. Gruenwald, P. Geo.	
September 6-10, Oct 4, 2001	6 days
J. Kerr, P. Eng.	
September 6-10, 2001	5½ days

OFFICE DAYS:

W. Gruenwald, P. Geo.	
November 12-15, 2001	2½ days
J. Kerr, P. Eng.	
October 31, 2001	1 day

APPENDIX E

STATEMENT OF EXPENDITURES

LABOUR:		
W. Gruenwald, P. Geo. 8½ days @ $400/day	$3,400.00	
J. Kerr, P. Eng. 6½ days @ $400/day	2,600.00	
E. Gruenwald, Drafting/Secretarial 20 hours @ $25/hour	500.00	$6,500.00
GEOCHEMICAL/ASSAY:		
Bondar Clegg Labs:	$1,556.06	
Activation Labs:	190.46	
Vancouver Petrographics:	164.51	1,911.03
VEHICLE COSTS:		
J. Kerr 1330 km @ $.38/km	505.40	
W. Gruenwald 730 km @ $.38/km	277.40	782.80
ACCOMMODATION/MEALS: 9 man days @ $60/man/day		540.00
SUPPLIES: Flagging, thread, sample bags, aluminum tags		94.50
REPORT COMPILATION AND MISCELLANEOUS: Photocopies, map printing, report binding, telephone, freight		100.00
TOTAL:		**$9,928.33**

APPENDIX F

REFERENCES

Gruenwald, W. (2000)	Perry River Project. B.C. Prospector's Assistance Program 1999
Cathro, M.S. and Lefebure, D.V. (2000)	Several New Plutonic related Gold, Bismuth and Tungsten Occurrences in Southern British Columbia; Geological Field Work, 1999; Paper 2000-1
Journeay, M. (1982)	Geology of North Central Frenchman Cap Dome, Open File 2447
Lefebure, D.V. and Cathro, M (1999)	Prospective areas in British Columbia for Gold-Tungsten-Bismuth Veins; B.C. Ministry of Energy and Mines, Open File 1999-3, 1:2,000,000 scale map.
Ministry of Energy and Mines:	Minfile and Assessment reports for Project area.
Okulitch, A.V. (1984)	The role of the Shuswap Metamorphic Complex in Cordilleran Tectonism: a review; Canadian Journal of Earth Sciences, Volume 16, pages 1171-1193
Parrish, R.R. (1995)	Thermal Evolution of the Southeastern Canadian Cordillera; Canadian Journal of Earth Sciences, Volume 32, pages 1618-1642
Smith, M. et al (1999)	Geology of the Liese Zone, Pogo Property, East-Central Alaska; SEG Newsletter – Number 38
Turner, T. (1995):	Prospecting Report on the Ratchford Creek Area, NTS Map No 082M/07
Wheeler, J.O. (1965)	Big Bend Map Area, British Columbia, 82M (East Half); Geological Survey of Canada, Paper 64-32, 37 pages

APPENDIX G

CERTIFICATE

I, WARNER GRUENWALD OF THE CITY OF VERNON, BRITISH COLUMBIA HEREBY CERTIFY THAT:

1. I am a graduate of the University of British Columbia with a B. Sc. degree in Geology (1972).

2. I am a registered member of the Professional Engineers and Geoscientists of British Columbia (#23202).

3. I am a fellow of the Geological Association of Canada (F2958)

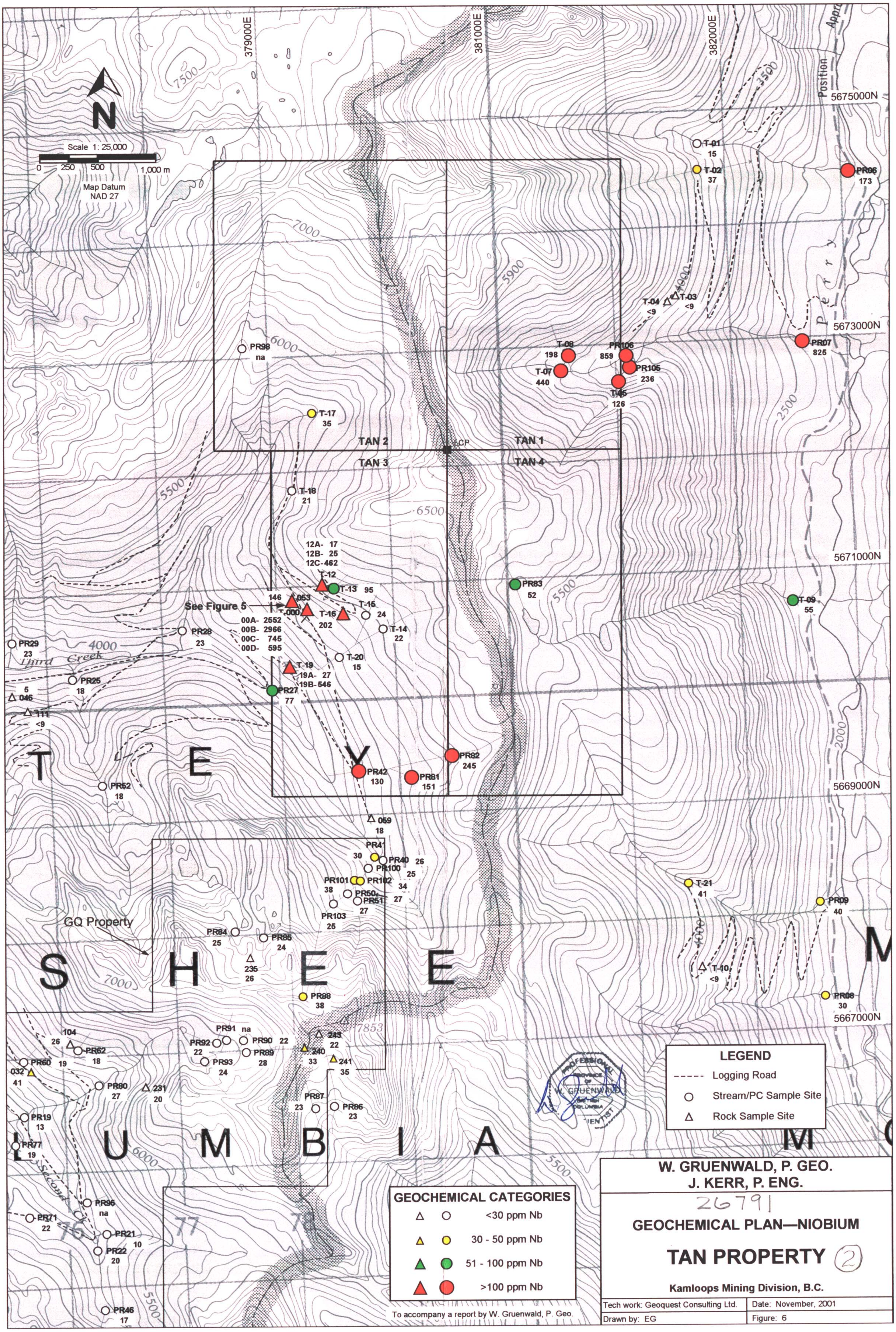
4. I am employed as consulting geologist and president of Geoquest Consulting Ltd., Vernon, and B.C.

5. I have practiced continuously as a Geologist for the past 28 years in western Canada and the US.

6. I was actively involved in the 2001 exploration program on the Tan property.

W. Gruenwald, P. Geo., FGAC

Dated: November 15, 2001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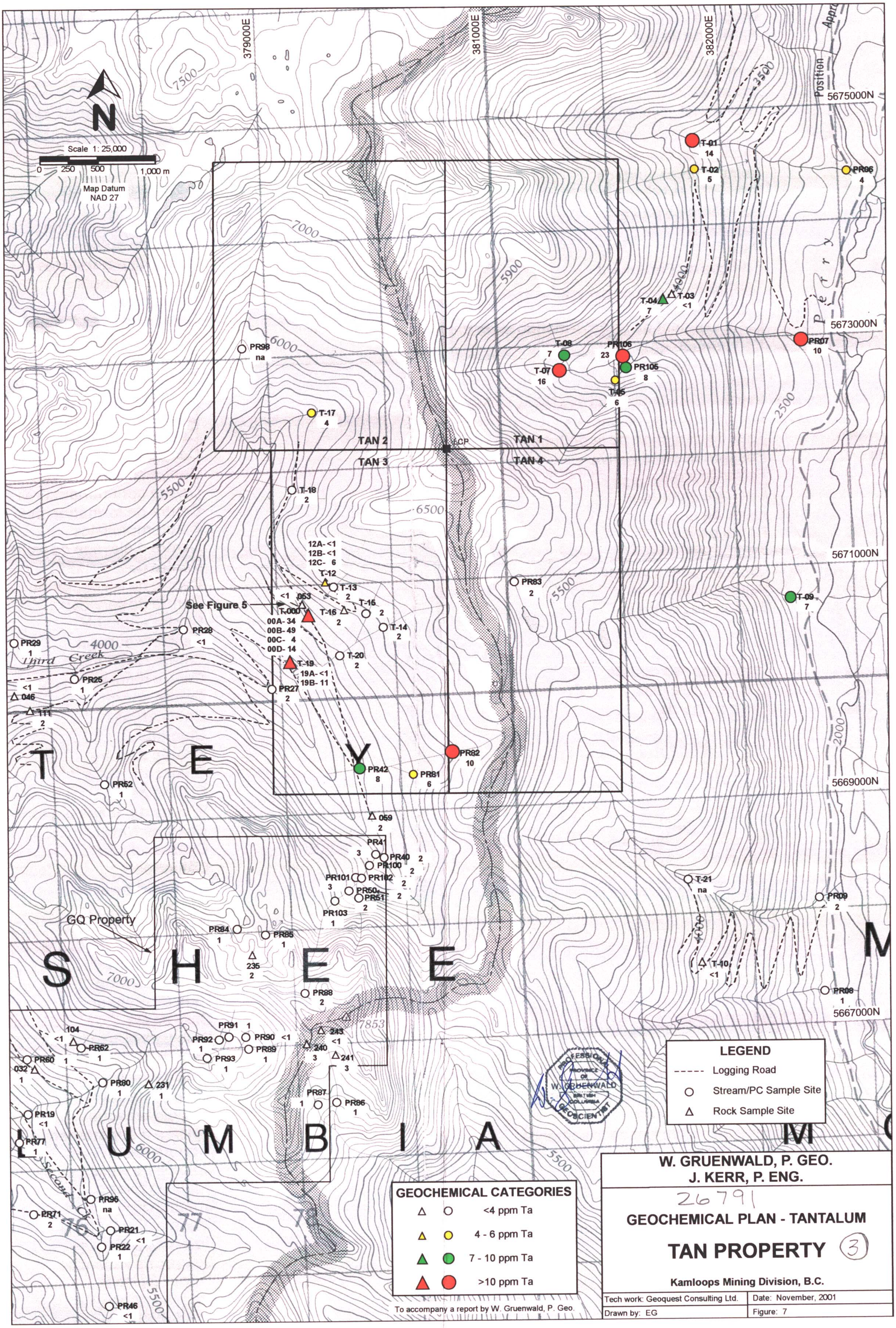
5667000N
TAN 1
TAN 2
TAN 3
TAN 4
LCP
See Figure 5
Third Creek
GQ Property
Perry
LEGEND
Logging Road
Stream/PC Sample Site
Rock Sample Site
GEOCHEMICAL CATEGORIES
<30 ppm Nb
30 - 50 ppm Nb
51 - 100 ppm Nb
>100 ppm Nb
To accompany a report by W. Gruenwald, P. Geo.
W. GRUENWALD, P. GEO.
J. KERR, P. ENG.
26791
GEOCHEMICAL PLAN—NIOBIUM
TAN PROPERTY (2)
Kamloops Mining Division, B.C.
Tech work: Geoquest Consulting Ltd.
Date: November, 2001
Drawn by: EG
Figure: 6



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382000E
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5669000N
5667000N
TAN 1
TAN 2
TAN 3
TAN 4
LCP
See Figure 5
GQ Property
Third Creek
Perry
T-01 14
T-02 5
PR06 4
T-04 7
T-03 <1
T-08 7
PR106 23
PR105 8
T-07 16
T-05 6
PR07 10
PR98 na
T-17 4
T-18 2
12A- <1
12B- <1
12C- 6
T-12
T-13 2
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T-16 2
T-14 2
T-000
00A- 34
00B- 49
00C- 4
00D- 14
053
T-19
19A- <1
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T-20 2
PR28 <1
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PR29 1
PR25 1
046
111 2
PR83 2
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PR42 8
PR81 6
PR52 1
059 2
PR41 3
PR40 2
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PR101 3
PR102 2
PR50
PR51 2
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235 2
PR88 2
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T-10 <1
PR08 1
7853
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240 3
241 3
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PR92 1
PR90 <1
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PR93 1
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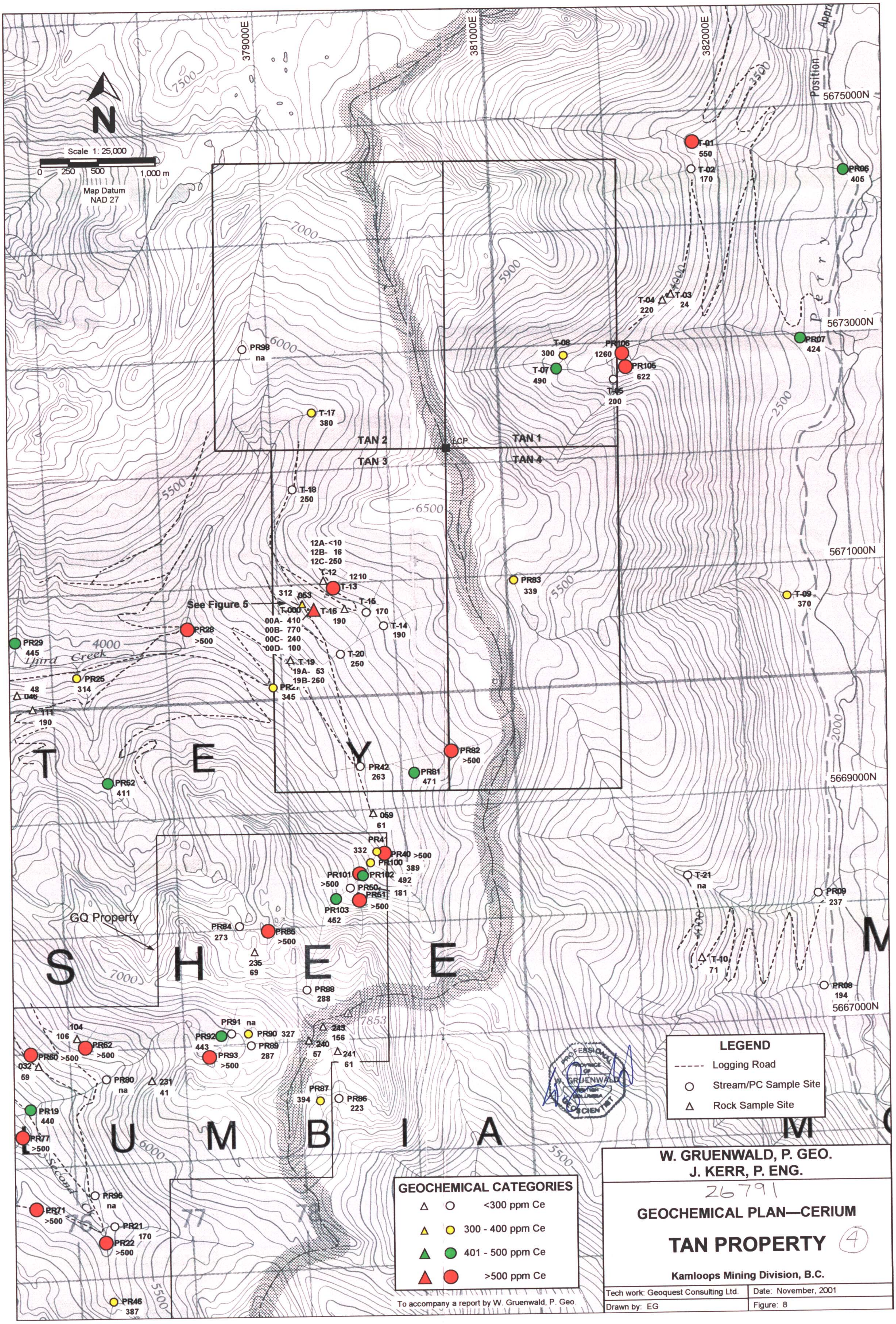
PR62 1
PR60 1
032 1
PR80 1
231 1
PR87 1
PR86 1
PR19 <1
PR77 1
PR95 na
PR71 2
PR21 <1
PR22 1
PR46 <1
T E Y
S H E E M
L U M B I A M
LEGEND
Logging Road
Stream/PC Sample Site
Rock Sample Site
GEOCHEMICAL CATEGORIES
<4 ppm Ta
4 - 6 ppm Ta
7 - 10 ppm Ta
>10 ppm Ta
To accompany a report by W. Gruenwald, P. Geo.
PROFESSIONAL GEOSCIENTIST PROVINCE OF BRITISH COLUMBIA W. GRUENWALD
W. GRUENWALD, P. GEO.
J. KERR, P. ENG.
26791
GEOCHEMICAL PLAN - TANTALUM
TAN PROPERTY
3
Kamloops Mining Division, B.C.
Tech work: Geoquest Consulting Ltd.
Date: November, 2001
Drawn by: EG
Figure: 7



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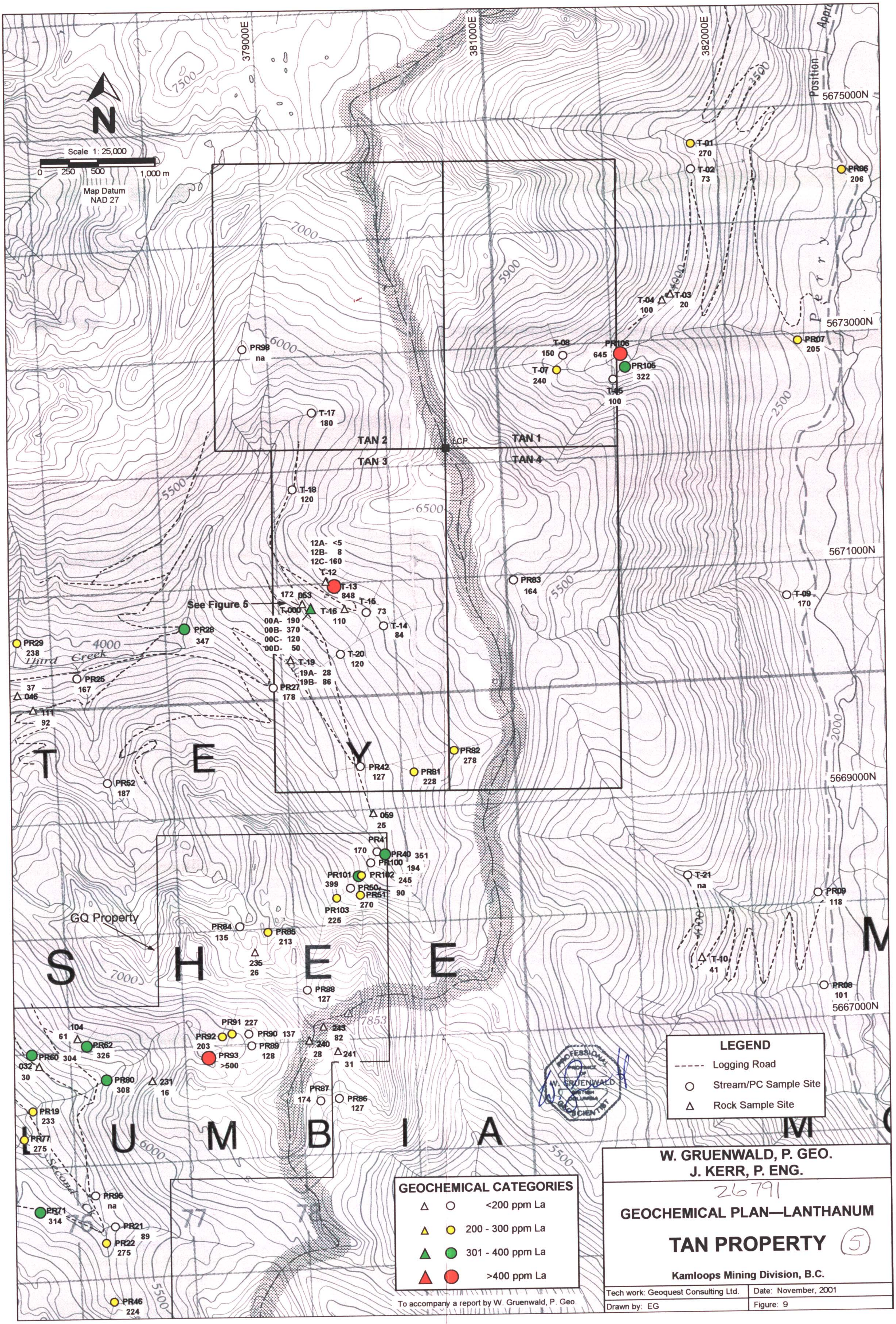
5671000N
5669000N
5667000N
TAN 1
TAN 2
TAN 3
TAN 4
LCP
See Figure 5
GQ Property
Third Creek
Second
Perry
Position
T E Y
S H E E
L U M B I A
M
LEGEND
Logging Road
Stream/PC Sample Site
Rock Sample Site
GEOCHEMICAL CATEGORIES
<300 ppm Ce
300 - 400 ppm Ce
401 - 500 ppm Ce
>500 ppm Ce
To accompany a report by W. Gruenwald, P. Geo.
W. GRUENWALD, P. GEO.
J. KERR, P. ENG.
26791
GEOCHEMICAL PLAN—CERIUM
TAN PROPERTY
4
Kamloops Mining Division, B.C.
Tech work: Geoquest Consulting Ltd.
Date: November, 2001
Drawn by: EG
Figure: 8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382000E
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5673000N
5671000N
5669000N
5667000N
TAN 1
TAN 2
TAN 3
TAN 4
LCP
See Figure 5
GQ Property
Third Creek
Perry
T E Y
S H E E
U M B I A
PR98 na
T-17 180
T-18 120
12A- <5
12B- 8
12C- 160
T-12
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172 053
T-000
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00B- 370
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19B- 86
T-20 120
PR27 178
PR28 347
PR29 238
PR25 167
37
046
111 92
PR42 127
PR81 228
PR82 278
PR83 164
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059 25
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PR40 351
PR100 194
PR101 399
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PR51 270
PR103 225
PR84 135
PR85 213
235 26
PR88 127
PR91 227
PR92 203
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243 82
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PR86 127
104 61
PR62 326
PR60 304
032 30
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231 16
PR19 233
PR77 275
PR95 na
PR71 314
PR21 89
PR22 275
PR46 224
T-01 270
T-02 73
PR06 206
T-04 100
T-03 20
PR07 205
T-08 150
PR106 645
PR105 322
T-07 240
T-05 100
T-09 170
T-21 na
PR09 118
T-10 41
PR08 101
7853
LEGEND
Logging Road
Stream/PC Sample Site
Rock Sample Site
GEOCHEMICAL CATEGORIES
<200 ppm La
200 - 300 ppm La
301 - 400 ppm La
>400 ppm La
To accompany a report by W. Gruenwald, P. Geo.
W. GRUENWALD, P. GEO.
J. KERR, P. ENG.
26791
GEOCHEMICAL PLAN—LANTHANUM
TAN PROPERTY
5
Kamloops Mining Division, B.C.
Tech work: Geoquest Consulting Ltd.
Date: November, 2001
Drawn by: EG
Figure: 9