

SOUTHERN RIO RESOURCES LTD.

SUMMARY REPORT

**THE 2002 DIAMOND DRILLING PROGRAM
ON THE TSACHA PROPERTY, OMENICA MINING DIVISION,
CENTRAL B.C.**

NTS MAP SHEETS 93F/3E, 2W

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November 29, 2002

**GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT**

27.091

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1. SUMMARY

During the period October 10 through 31, 2002, Southern Rio Resources Ltd. completed a seven hole, 951.6 metre diamond drilling program on the Tsacha Property, located approximately 125 kilometres southwest of Vanderhoof, within the Omenica Mining Division of central British Columbia.

The Tsacha Property is currently under option from Teck Cominco Limited, and Southern Rio has the right to earn a 100 % interest in the claim block through completing exploration expenditures totaling \$1.2 million by March 30, 2005, and by issuing 400,000 common shares to Teck Cominco. Of that obligation, the first \$200,000 is firm, and is required to have been completed by March 30, 2003. Teck Cominco retains the right to back-in for a 65% interest in the project, by re-imbursing Southern Rio two times all expenditures to date, and by delivering a bankable feasibility study within four years of the back-in. Should Teck Cominco choose not to exercise its back-in, it will retain a sliding scale NSR royalty of between 2.0 and 4.5%, based on gold price.

The Tsacha property is currently comprised of 5 claims totaling 84 units and approximately 2,100 hectares. All claims comprising the property are in good standing to 2006 and beyond.

The Tsacha Property has a relatively short exploration history. The primary showing on the property, the Tommy Vein, was discovered in 1993 during a regional reconnaissance program by the B.C. Geological Survey. On announcement of that discovery, Teck staked the property in early 1994. Between 1994 and 1998, Teck completed various programs of prospecting, geological mapping, trenching, limited IP geophysical surveys, and some 16,074 metres of diamond drilling in 81 holes. Most of the drilling concentrated on defining the Tommy Vein system, a low sulphidation epithermal quartz vein hosted within a thick sequence of Jurassic aged porphyritic rhyolitic volcanics. That drilling had defined the vein over a strike length of 640 metres, with an average thickness of 3-4 metres, and grade averaging approximately 7.4 gpt Au and 65.0 gpt Ag. Throughout its defined strike length, a diorite sill, of between 100 and 130 metres in thickness, has intruded the local stratigraphy and interrupted down-dip vein continuity. Drilling beneath the sill, however, has demonstrated that there is no appreciable offset to the vein, and that vein thickness, and in some holes, grade, are maintained. Several other veins have been identified on the property, though to date none have demonstrated the lateral continuity and grade of the Tommy Vein.

Southern Rio drilled four holes from between 200 metres and 400 metres north of the last known vein intercept, in order to evaluate the tonnage potential of the Tommy Vein target. All four holes hit quartz vein material, similar in texture to the Tommy Vein, with true widths ranging from 0.51 m to 4.21 m. Only one of the four holes, however, returned anomalous gold values (Hole TS-02-83, with 0.68 gpt Au over 4.55 metres).

While no economic intersections were returned from this target, the greatly expanded size of the target vein structure, and the fact that it is now open and unconstrained to the north and at depth, enhances the prospectivity of the Tsacha Property. Further drilling will be required to assess the potential for additional mineralized zones within this major epithermal system.

In addition to drilling on the northern extension of the Tommy Vein, two holes were completed within the previously identified strike extent of the vein, in areas of significant gaps in drill data. Hole TS-02-84, drilled off the north end of known mineralization, returned an intersection of 0.61 gpt Au over 3.0 metres. Hole TS-02-85, drilled within the central portion of known mineralization, returned 4.53 gpt Au and 28.53 gpt Ag over 7.90 metres.

One hole (TS-02-86) was drilled to test a possible southern extension of the Larry Vein, a parallel target to the east of the Tommy Vein. That hole failed to encounter any appreciable quartz vein material or significant assays.

Total costs incurred in completing the drilling program at Tsacha were \$145,817.13.

2. RECOMMENDATIONS AND YEAR 2003 EXPLORATION BUDGET

The much increased size of the Tommy Vein and structure, demonstrated by the recent drilling program significantly enhances the exploration up-side of the Tsacha Property, as there is potential to discover new zones of mineralization to the north of all previous work. As such, additional drilling is warranted north of Tommy Lake, in an effort to further expand the strike length of the vein system. Six holes totaling 600 metres, in two, three-hole fences, should be drilled across the projected vein extension north of Tommy Lake. The two fences should be sufficiently widely spaced as to have significant target size implications if successful. Final collar selection will depend on field and access conditions, still to be determined.

Similarly, any demonstrated down-dip continuity to the vein, in terms of grade and width below the microdiorite sill within areas of strong near-surface mineralization will have a dramatic impact on tonnage potential. At least three holes totaling 1500 metres should be considered to test the Tommy Vein below the sill between Lines 45N and 51N.

A total Year 2003 drilling program of 2100 to 2500 metres is therefore recommended for 2003, at an estimated cost of between \$315,000 and \$375,000.

3. INTRODUCTION

This report summarizes the results of a seven hole, 951.6 metre diamond drilling program completed on the Tsacha Property during the period October 10 through 31, 2002. The program was part of a larger drilling campaign that also saw four holes completed on the adjacent Tam Property, and which is the subject of a separate report.

4. LOCATION, ACCESS AND PHYSIOGRAPHY

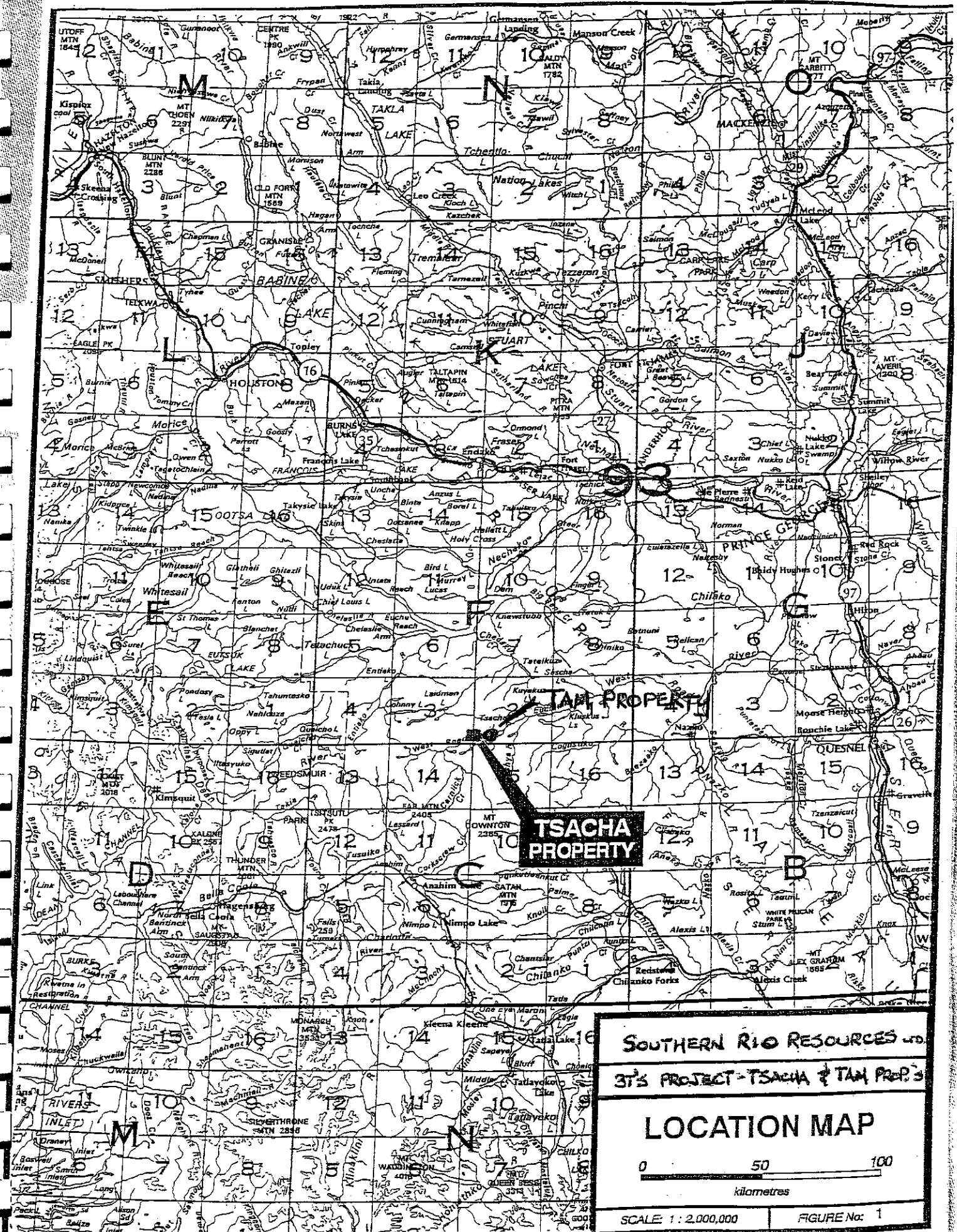
The Tsacha property is located 125 kilometres southwest of the town of Vanderhoof, B.C., within the Omenica Mining Division, NTS Map Sheets 93F/3E and 2W. Latitude and longitude of the property is 53 degrees, 2 minutes north and 125 degrees, 2 minutes west, respectively. (See Figure 1)

Access to the property is relatively good, via the Kenney Dam Road southwest from Vanderhoof for 25 kilometres, to the Kluskus-Ootsa Forest Service Road. That road extends 161 kilometres southwest, at which point the 5 km long Green 9000 Road provides access to the northernmost portion of the property. Drill roads extending south from this road provide access to both the camp location, and all portions of the property, including the Tommy Vein area.

The Kluskus-Ootsa Forest Service Road is an extremely busy logging road, with heavy traffic of loaded twelve foot wide logging trucks running north to service mills in both Vanderhoof and Prince George during week days. All commercial traffic on the roads use radios and a series of pull-outs to facilitate outbound traffic flow, and any visitors to the property should either obtain radios, or travel inbound in convoy with other radio equipped vehicles.

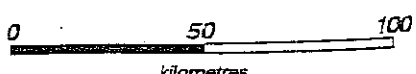
There is no fuel available on the Kluskus-Ootsa Road, and with a round trip distance of approximately 400 km., requiring almost six to seven hours, it is recommended all vehicles carry additional fuel in Jerry cans.

The property lies within the Naglico Hills of the Nechako Plateau, which consists of low to moderate rounded hills interspersed with wet lowlands and dotted with numerous, small lakes. Elevation on the property ranges between 1065 and 1280 metres ASL. Till cover is extensive, and outcrop exposure rare. Vegetation is comprised almost exclusively of jackpine, with lesser spruce and rare poplar and tamarack in small deciduous stands. The pine forest has been heavily damaged by the Mountain Pine Beetle infestation, with close to 30% kill in the area. Because of the kill, blow down and forest fire are serious problems in the area, making access in the bush difficult in places.



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31'S PROJECT - TSACHA & TAM PROP'S

LOCATION MAP



SCALE 1:2,000,000

FIGURE No: 1

5. CLAIM DESCRIPTION AND STATUS

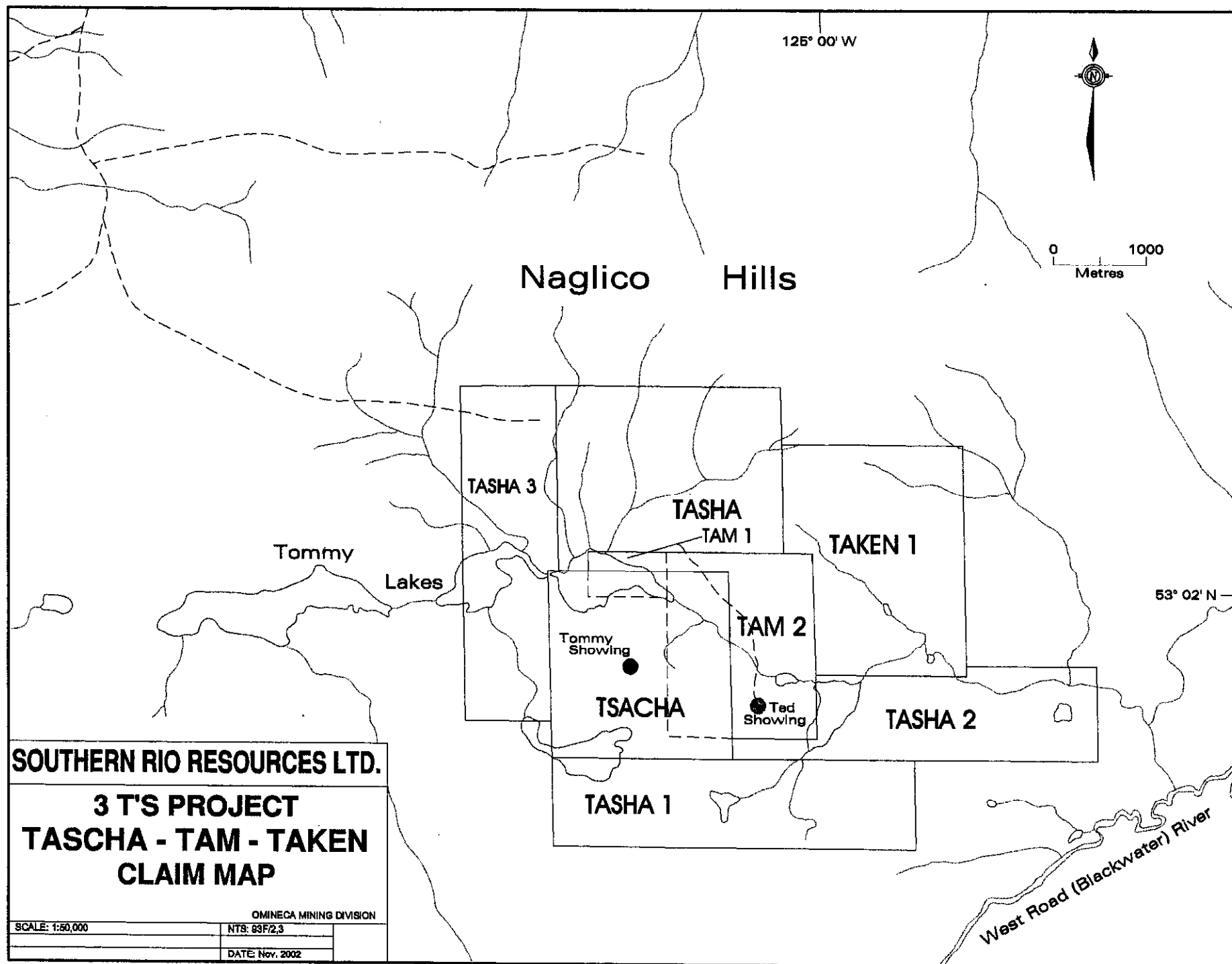
The Tsacha Property, comprising the Tsacha, Tasha, Tasha 1, Tasha 2, and Tasha 3 claims, consists of 84 contiguous units covering approximately 2,100 hectares (see Figure 2). The claims are held 100% by Teck Cominco Ltd. Under the terms of an option agreement dated April 02, 2002, Southern Rio Resources Ltd. can earn a 100% interest in the property by completing exploration expenditures totaling C\$1,200,000 by March 30, 2005, and issuing a total of 400,000 shares to Teck Cominco. Of that exploration commitment, the first \$200,000 is firm, and must be completed by March 30, 2003.

After Southern Rio exercises its option, and up to 365 days after completion of a prefeasibility study, Teck Cominco may exercise a back-in right to earn a 65% interest in the Tsacha Property, and additional properties held by Southern Rio in the area (Tam, Taken, Tim). To exercise the back-in, Teck Cominco must incur exploration expenditures of at least twice the amount spent by Southern Rio on the Tsacha and adjoining properties, and deliver to Southern Rio within four years a full feasibility study on the properties. Should Teck Cominco not exercise its back-in right, it will retain a sliding scale NSR Royalty of between 2.0% and 4.5%, depending on gold price. Southern Rio may purchase half of the NSR at any time for C\$2,000,000.

All claims comprising the Tsacha Property are currently in good standing until 2006 and beyond, as summarized in the attached Table 1.

Table 1
Tsacha Property Claim Data

Claim Name	Record No.	No. of Units	Current Expiry Date
Tsacha	323354	16	January 28, 2007
Tasha	325898	20	May 30, 2007
Tasha 1	326061	16	June 03, 2007
Tasha 2	326062	16	June 30, 2007
Tasha 3	342344	16	November 23, 2006



6. PROPERTY HISTORY

The Tsacha Property and Tommy Lakes area has had only a brief exploration history. There is no record of exploration activity in the area prior to the discovery of auriferous quartz veins in 1993 by the B.C. Geological Survey (Diakow and Webster, 1994). The discovery, which was announced at the Cordilleran Round-Up in Vancouver in January 1994, reported values up to 3.7 g/t Au and 41.8 g/t Ag from outcropping quartz veins. The showing was staked by Teck Corporation in 1994, with other companies, including Cogema Limited and Phelps Dodge Corporation of Canada, acquiring claims in the area soon after.

In 1994, four veins and a vein-stockwork zone were delineated on the Tsacha property. The Tommy Vein was traced by trenching over a strike length of 515m. Values fairly consistently ≥ 1 g/t Au were obtained along the entire exposure of the vein with maximum values of 61.9 g/t Au, 292.5 g/t Ag over 1.5m, indicating good potential for the occurrence of high grade ore shoots (Pautler, 1994).

In 1995, trenching and 5,195 metres of diamond drilling in 35 holes were completed, primarily on the Tommy Vein. The vein was tested over a 640m strike extent and down to a 150m dip extent. A sill was found to cut the vein at depth and to the north but potential was recognized beyond the sill. Three holes tested for the extension beneath the sill but the sill was thicker than anticipated, and these holes were unsuccessful in testing the depth potential of the Tommy Vein system.

The 1996 work on the Tsacha Property consisted of continued property mapping, prospecting, grid extension and trail building, 500 line metres of excavator trenching in 14 trenches and 3,366 metres of diamond drilling in 23 holes (Pautler, 1996). The work concentrated on outlining and tracing other veins on the property besides the main Tommy Vein. The trenching program tested the Ian and Larry Vein/Stockwork Zones, the Goofy Stockwork Zone and the Johnny, Billy, Larry, Goofy and Barney Veins, with one infill trench on the Tommy Vein. The drilling tested the Johnny, Billy, Larry, Barney, Goofy and Alf Veins. Three holes tested the Tommy Vein at about 150m down dip to test for ore shoots and the nature of the vein proximal to the sill.

The 1997 work program on the Tsacha property consisted of 47.9 line kilometres of Real Section Induced Polarization (IP) and 1,585.7 metres of diamond drilling in 8 holes directed at the IP anomalies (Smith, 1997). The program was managed by Teck and funded by Corona Gold Corp. under an option agreement. Drilling in 1997 was located north of Tommy Lake and was not unsuccessful in intersecting any significant mineralization related to the IP anomalies.

The 1998 program, also managed by Teck and funded by Corona Gold Corp., consisted of 15 diamond drill holes totaling 5,926.5 metres (Smith, 1998). The program concentrated on testing for the continuation of the Tommy Vein below the flat lying sill near the centre of the property, taking into account there may be

an offset to the vein. The drill hole collars were located on existing trails and/or drill pads. Three shallow holes also were drilled to test the Larry Vein above the sill. The Tommy Vein was intersected directly down dip below the sill with significant grades including 3.1 g/t Au, 22.1 g/t Ag over a 9.3 metres true width in DDH 98-81. The Larry Vein was also intersected beneath the sill in three holes.

7. GEOLOGICAL SETTING

7.i) Regional Setting

The Tsacha Property is situated within the Naglico Hills of the southern Nechako Plateau within the Stikine Terrane of the Intermontane Belt of the Canadian Cordillera (see Figure 3).

The Nechako Plateau is an area of subdued relief. Glacial drift is extensive and bedrock exposure is limited to between 5-10% of the area. The geology of the area was first mapped at a regional scale (1:250,000) by Tipper (1963). More detailed mapping of the southern Nechako Plateau was recently conducted by Diakow and Webster (1994) and Diakow *et. al.* (1993, 1994). This mapping included the Tsacha Property, which is within the Fawnie Creek Map area (NTS 93F/3).

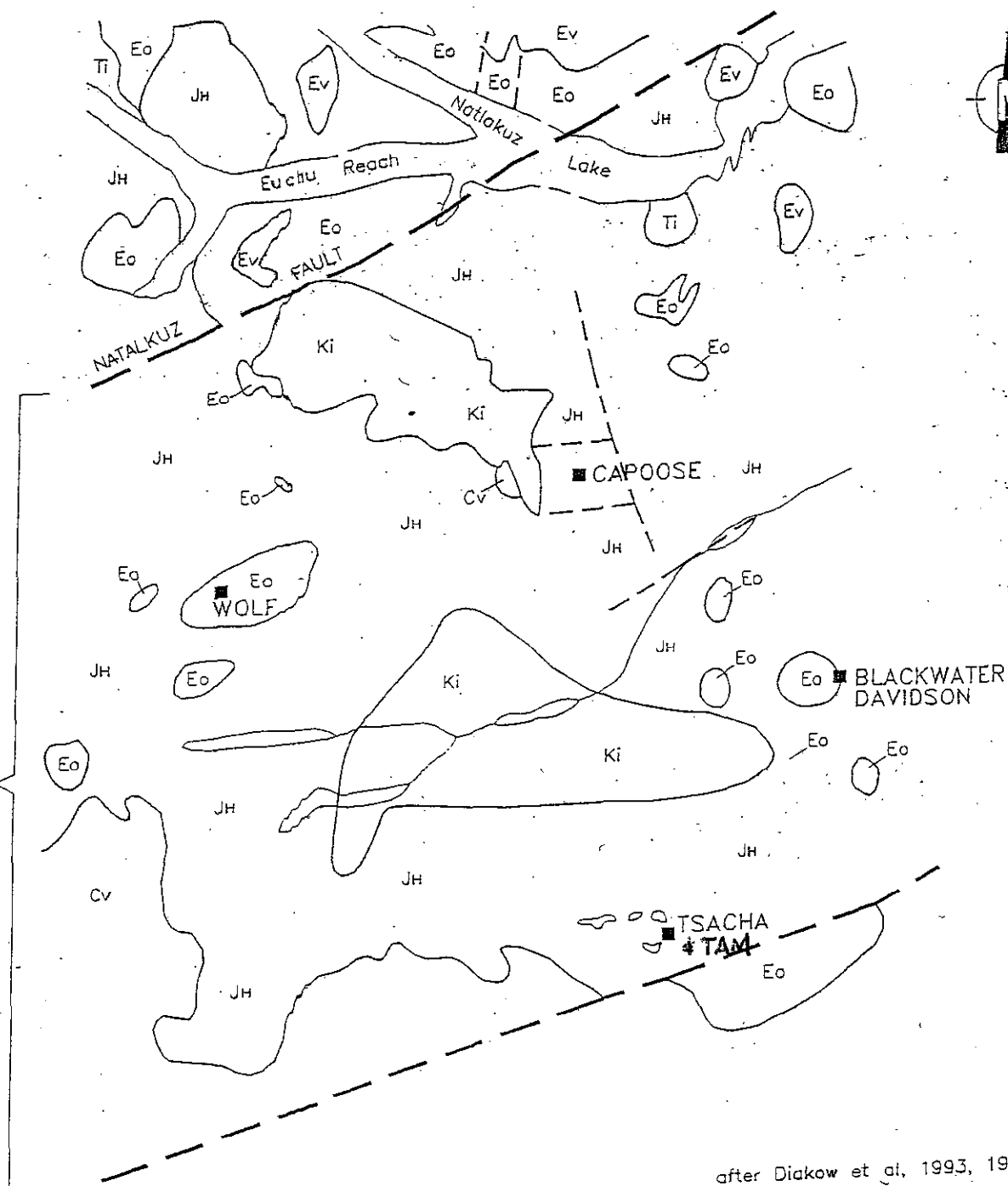
The Fawnie Creek Map area is situated near the southern margin of a northeast-trending, structurally raised area referred to as the Nechako Uplift (Diakow and Webster, 1994). The uplift, bounded by the Nataalkuz Fault to the north and Blackwater Fault to the south, provides a window through younger cover to underlying volcanic and sedimentary rocks of the regionally extensive Lower to Middle Jurassic Hazelton Group and Late Jurassic Bowser Lake Group. These strata are intruded by the Late Cretaceous Capoose Batholith, a granodiorite to quartz monzonite intrusion that has been unroofed in broad areas north and south of Entiako Spur. Eocene volcanic rocks of the Ootsa Lake and Endako Groups are locally extensive. Isolated cappings of Miocene Chilcotin Group olivine basalt are rare within the uplift.

In the Naglico Hills, volcanic rocks of the Hazelton Group predominate; pyroxene-phyric basalt flows and tuffs of the Naglico Formation are extensive, but the Tommy Lakes area, and specifically the Tsacha property, is also underlain by quartz-phyric rhyolite tuffs and flows of the Entiako Formation, forming the base of the Hazelton Group.

7. ii) Property Geology

The Tsacha property is primarily underlain by felsic and andesitic flows and tuffs of the Entiako Formation of the Jurassic Hazelton Group. Feldspar and augite porphyritic basaltic andesite flows, with minor

Nechako Uplift



after Diakow et al, 1993, 1994

Tertiary

- Cv Chilcotin Volcanics
- Ev Endako Volcanics
- Eo Ootsa Group
mainly volcanics

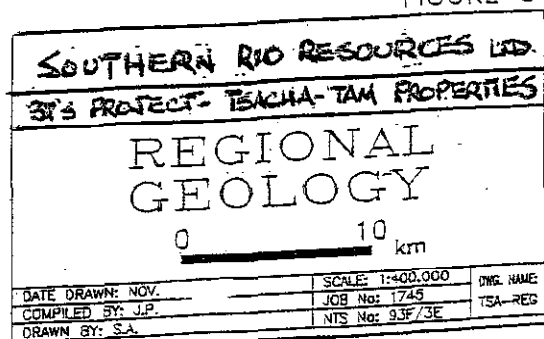
Jurassic

- JH Hazelton Group
mainly volcanics

Intrusions

- Ti Tertiary Intrusions
- Ki Cretaceous Intrusions

FIGURE 3



volcaniclastic sedimentary rocks, mapped as Naglico Formation of the Hazelton Group, overlie the Entiako Formation. An augite porphyry plug is exposed in the southern property area. The above units are intruded by late Cretaceous microdiorite dykes and sills.

A felsic quartz and feldspar phyric tuff of the Entiako Formation is the most extensive unit on the property and typically contains 15-10% quartz and 15-40% feldspar phenocrysts in variably welded crystal-lithic tuffs. The unit is magnetic when fresh, typically with a dark, almost black to grey-green to maroon coloured matrix, often glassy with quartz and feldspar phenocrysts. The latter are commonly sausseritized. The maroon colour is due to pervasive secondary hematite alteration. Lighter coloured compressed (welded) lithic fragments in the rhyolite tuff define the fabric, which resembles flow banding. The welding is common south of Tommy Lake but rare to the north. The welding has shown that the unit has a shallow ($<10^\circ$) southerly dip. Basaltic andesite lapilli fragments also occur but are not compressed. They are generally a few millimetres across but an occasional fragment may be up to 5-10 cm diameter.

A strongly volcaniclastic unit, seen in drill core north of Tommy Lake, may be part of the Entiako Formation. The unit typically has high hematite content and contains 2-5% quartz and 20-45% feldspar phenocrysts in flows and crystal-lithic tuffs. In the southeastern area of the property basaltic andesite, probably of the Naglico Formation, conformably overlies the felsic unit. It is mainly comprised of green coloured, magnetic feldspar and augite porphyritic flows.

An augite porphyry plug, coarser than the basaltic andesite flows, is exposed in the southern portion of the claims. It is probably cogenetic with the flows. Minor volcanic-derived calcareous siltstone, sandstone and conglomerate, with abundant plagioclase grains and local argillaceous beds outcrops on the north side of the augite porphyry plug. It appears to be locally derived, primarily from the Entiako and Naglico Formations, but clasts of the augite porphyry plug are also evident, indicating that the sedimentary rocks are younger than the plug.

A late Cretaceous microdiorite intrusive occurs as sills and dykes on the property. South of Tommy Lake a 100 metres thick microdiorite sill has been mapped on surface, diamond drilling has shown it to be 100 to 150m thick and have a shallow southerly dip ($\sim 10^\circ$), the same as the welded tuff, which it intrudes. Below the sill the Tommy and Larry Veins are also hosted within the welded tuff (Smith, 1998). Another sill is exposed on top of and down the south side of a hill as a dip slope expression, just southeast of L4200N/5300E. The welded tuff is exposed beneath the microdiorite at this locality as well. The microdiorite is fine grained, grey-green to brownish in colour, variably magnetic, blocky weathering and is characterized by calcite amygdules and minor vitreous biotite phenocrysts. Occasional plagioclase phenocrysts can be distinguished. At the south end of the grid area, the microdiorite appears to grade into andesite dykes with calcite amygdules and minor augite phenocrysts.

7. iii) Structural Geology

A regional northwest trending lineament follows Tommy Creek. This lineament may have economic significance in that it passes through the Wolf and Clisbako properties (see Diakow and Webster, 1994). The lineament is most evident on the airborne magnetic map of the Interior Plateau, GSC Open File 2785.

The southern boundary of the Nechako Uplift follows the Blackwater River, just south of the property and it is believed to represent a major ENE trending regional fault. Similar east-northeasterly trends are evident on the property through Carter Lake and another north of Tommy Lake and are best observed on the 1:15,000 scale aerial photographs of the area.

Locally northerly trends are less evident but are manifested in the north-south striking veins observed on the property. Throughout this region the north trending structures are believed related to Tertiary extension. However, the presence of older pre-existing structures is confirmed by the pre-Late Cretaceous Tommy Vein System.

Numerous faults have been identified on the property. Faulting complicates the southern strike continuity of the Tommy Vein and the amount of offset has not been determined. The continuation of the Tommy and Larry Vein zones beneath the sill was found by the 1998 drilling and has shown there to be little (less than 20m to the east) to no offset. Drilling has shown the Larry Vein to be offset by faulting both above and below the sill and has not been traced as continuously as the Tommy Vein from north to south.

7.iv) Target Deposit Model

Numerous styles of base and precious metal mineralization, including epithermal, porphyry and skarn, are known in the region (Schroeter and Lane, 1994). The target deposit type or model is low sulphidation epithermal style gold-silver veins and stockwork zones similar to the style of mineralization at the Midas Mine of Franco Nevada in Nevada, the El Penon Mine of Meridian Minerals in Chile, and the former Blackdome Mine in Southern BC. Mineralization is typically volcanic hosted, in back-arc tectonic settings (Cooke and Simmons, 2000; Corbett and Leach, 1999). Gold-silver mineralization in these deposits is associated with a variety of quartz vein textures and grain sizes. Included are chalcedonic to coarse-grained quartz occurring in banded, saccharoidal, comb, and bladed carbonate-replacement vein textures. These gold deposits typically contain high-grade sections, often with important silver credits, high silver to gold ratios, "clean" metallurgy, and good recoveries. The Tsacha property has returned "bonanza-grade" precious metal (gold and silver) values and has excellent potential to uncover additional mineralization.

7. v) Mineralization

A total of seven veins, three vein-stockwork zones and two silicified zones have been found and explored on the property. All are hosted by the felsic welded quartz feldspar crystal-lithic tuff within Unit 1 and intruded by the microdiorite. The major veins are all subparallel and generally strike north-south.

The best-exposed and explored vein to date is the Tommy Vein. The near vertically dipping Tommy Vein trends north, averages 3-4m in thickness and has been traced along strike for 640m above the sill. Below the sill the vein has been traced for over 130m along strike and over 100m down dip in four intercepts. The thickness of the vein varied from 0.7m to 9.3m true width.

The Tommy Vein system consists of one or sometimes more individual veins separated by intensely silicified and stockworked wallrock. It primarily consists of bull quartz grading to chalcedonic quartz, locally with sparry calcite and minor-banded chalcedony. Commonly crystalline and vuggy, the vein has classic epithermal textures that are abundant and include druses and colloform bands and development of amethyst with quartz. Increasing calcite content appears to correlate with lower grade gold mineralization. Vein margins and mineralization are generally quite sharp, but can be gradational where intense silicification and stockworking occurs outwards from vein margins. Parallel veinlets may extend up to 5 metres into the wallrock. The Tommy Vein has indicated excellent continuity along strike.

Other prominent veins on the property include the Larry Vein, the Barney Vein and the Johnny Vein. The Larry Vein is approximately 135m east of the Tommy Vein and has been traced for over 300m along strike above the sill. Results above the sill include 7.1 g/t Au, 149.8 g/t Ag over 5.1 metres from Trench 95-25 and up to 6.8 g/t Au over 3.8m, including 8.4 g/t Au over 2.5 metres, from DDH 95-23. The 1998 drilling located the Larry Vein in three intercepts below the sill, returning a best interval of 6.4 g/t Au and 46.3 g/t Ag over 1.6 metres. The intercepts below the sill cover 50 metres of strike length and 100 metres of down dip length.

Mineralized veins encountered to date appear similar. Visible sulphide minerals are generally lacking in the veins. Minor visible pyrite and rare galena and chalcopryrite occur within veins and stockwork but do not always correlate to gold content. Fine grained native gold and electrum as well as stephanite and argentite have been identified in thin sections from grey chalcedony bands within the Tommy Vein (Pautler and Wells, 1995).

Alteration around the veins is weak, consisting mainly of silicification. On a property wide scale, secondary hematite, which gives the rocks a deep maroon colour and minor amounts of specularite are common. Clay and sericite occur variably within the wallrock with local strong concentrations such as at the southern end

of the Tommy Vein and associated with the Ian stockwork. The clay and sericite concentrations appear to be fault related.

Highlights of the mineralization uncovered to date include:

Tommy Vein

- The Tommy Vein was reported by Pautler et. al., 1998 to contain an inferred mineral resource of 478,000 tonnes grading 8.72 grams per tonne gold and 82.3 grams per tonne silver, using a 3.0 g/t cutoff, to an approximate depth of 120 metres but above the diorite sill.
- Best intersections: DDH 95-03, 6.2 metres @ 9.57 g/t Au; DDH 95-10, 6.7 metres @ 6.70 g/t Au; DDH 95-19, 7.2 metres @ 8.38 g/t Au; DDH 98-81, 14.7 metres @ 2.46 g/t Au.
- The results of the 1998 deep drilling are encouraging as seven of the 15 holes encountered significant gold values in either the Tommy or the Larry Veins beneath the sill.
- The eight of the 15 holes that did not intersect significant gold values beneath the sill encountered either faulting which offsets the veins, widening of the sill where veins were expected, or veins with low gold values.
- Excellent potential to increase resource down dip, below the sill and to the north where the Tommy Vein may "daylight" below the sill.
-

Larry Vein

- Located 135m east of Tommy, Trench 95-25 returned 7.1 g/t Au, 149.8 g/t Ag over 5.1 metres.
- Results above the sill include up to 6.8 g/t Au over 3.8 metres, including 8.4 g/t Au over 2.5 metres, from DDH 95-23.
- The 1998 drilling located the Larry Vein in three intercepts below the sill returning up to 6.4 g/t Au and 46.3 g/t Ag over 1.6 metres. The intercepts covered 50 metres of strike length and 100 metres of down dip length.

Johnny Vein

- Located 600 metres west of Tommy Vein between L 46 +50 N and L 48 + 50 N. One trench (T 96-28), on top of small knoll, returned 2.23 g/t Au, 8.2 g/t Ag over 3.7 metres; and 4.87 g/t Au, 63.4 g/t Ag over 3.7 metres.
- Moderate target. Testing of vein has indicated the potential for narrow, high-grade gold values (0.4 m 15.44 g/t Au) and continuity (traced for 100m strike).

Barney Vein

- Located 400 m east of the Tommy Vein between L 48 and L47 N.
- Tested by two trenches (T-96-36, T96-35), with limited exposure.

- The Barney Vein at 4725N/5425E, contains 14.1 g/t Au, 26.0 g/t Ag across the 0.6 m width. A float sample of the above yielded 16.5 g/t Au, 61.2 g/t Ag. The host stringer/stockwork zone was not consistently sampled.

Goofy Vein and Stockwork Zone

- Located 400-450 m east of Tommy Vein on L45 N.
- Tested by two trenches (T-96-34A, 34B), with reasonable outcrop exposure.
- The Goofy Vein runs 7.88 g/t Au, 108.9 g/t Ag over the 0.6m width. A quartz vein 60 metre east of the Goofy Vein contains 1.48 g/t Au over 1.0 metre.
- Tested by one 172.8m drill hole (DDH 96-53) south of the trenches, with minor silicified zones but no veining. Best value was 0.56 g/t Au over 1.1 metres.

8. ADJACENT PROPERTIES

Two adjoining properties show evidence of similar mineralization to that at Tsacha. The Tam Property is 100% owned by Southern Rio and adjoins the Tsacha Property to the east. In addition Southern Rio has an option to earn 100% of the Taken Property, northeast of the Tam, from Phelps Dodge Corp.

Two epithermal style veins were outlined by drilling on the Tam property by Phelps Dodge in 1996 (Fox, 1996). The Ted Vein, trending 165°/80-90°W, was traced for 100m along strike and 100m down dip by drilling and returned a significant intersection of 8.9 g/t Au and 394 g/t Ag over a 6.5m true width (TW) in DDH 252-9. The vein may represent the faulted extent of the Tommy Vein and is open to the south and below the sill, which was intersected between 70 and 110m. The Mint Vein, returned 1.4 g/t Au and 34.6 g/t Ag over 3.9m true width in drilling (Hole 252-2) and 5.1 g/t Au on surface. The vein is open to the north and south and below the sill, which was intersected at 45m. Quartz vein float on the property contains up to 12.7 g/t Au and 800+ g/t Ag.

Extensive quartz vein float is present on the Taken claim with linear trends evident and values up to 19.2 g/t Au and 148 g/t Ag. Other linear gold and silver soil anomalies occur on both the Tam and Taken properties, with values up to 252 ppb Au, which may reflect additional veins (Fox, 1999).

9.0 2002 DIAMOND DRILLING PROGRAM

During the period October 10 through 31, 2002, Southern Rio Resources completed a seven hole, 951.6 metre diamond drilling program on the property. The drilling was completed by Hy-Tech Drilling Ltd., a Smithers based contractor, using its own custom build hydraulic drill rig. All samples were assayed by Eco-Tech Laboratories, of Kamloops, with check assaying completed by Acme Analytical Laboratories, of Vancouver. On-site supervision of the drill program was supervised by the author, who acted as the Qualified Person under reporting guidelines outlined in National Policy 43-101. A discussion of QAQC measures in place during the drilling program are summarized in Section 9.viii) of this report.

Appendix 1 contains detailed drill logs for the seven holes. Appendix 2 contains all original assay data from the drilling program. Appendix 3 contains a collar location map for the seven holes, in relation to previous drilling completed by Teck. Appendix 4 contains a revised Longitudinal Section illustrating the respective locations of this year's diamond drilling program.

Table 2, below, summarizes all collar locations, hole orientations and depths. Table 3 summarizes significant intersections returned from the drilling program.

Table 2
Summary of 2002 Diamond Drill Holes, Tsacha Property

<u>Hole No.</u>	<u>Collar Location</u>	<u>Azimuth/Dip</u>	<u>Length</u>	<u>Target</u>
TS-02-82	L55+00N, 50+80E	270/-50	155.2 m	N. Extension of Tommy Vein
TS-02-83	L53+04N, 51+30E	270/-50	194.77 m	N. Extension of Tommy Vein
TS-02-84	L49+60N, 50+20E	270/-50	48.48 m	In-fill on Tommy Vein
TS-02-85	L47+23N, 50+38E	270/-43	60.70 m	In-fill on Tommy Vein
TS-02-86	L47+00N, 52+67E	270/-45	106.40 m	S. Extension of Larry Vein
TS-02-87	L53+04N, 51+30E	300/-50	203.45 m	N. Extension of Tommy Vein
TS-02-88	L55+00N, 1+30E	240/-50	182.6 m	N. Extension of Tommy Vein
TOTAL:			951.6 m	

Table 3
Summary of Significant 2002 Drill Intersections

<u>Hole No.</u>	<u>From/To (m)</u>	<u>Interval (m)</u>	<u>Estimated True Width (m)</u>	<u>Grade Au (gpt)</u>	<u>Grade Ag (gpt)</u>
TS-02-82	No significant intersections				
TS-02-83	143.22 – 147.77	4.55	2.91	0.68	7.21
TS-02-84	27.60 – 29.50	1.90	1.22	0.16	38.90
	32.30 – 35.30	3.00	1.92	0.61	7.30
TS-02-85	17.00 – 19.00	2.00	1.46	1.16	5.00
	22.30 – 30.20	7.90	5.78	4.53	28.53
TS-02-86	No significant intersections				
TS-02-87	No significant intersections				
TS-02-88	No significant intersections				

Below is a hole-by-hole discussion of results.

i) DDH TS-02-82

Collar Location: L55+00N, 50+80E

UTM Co-ordinates: (NAD 83) 363688E, 5877684N

Azimuth/Dip: 270/-50

Length: 155.2 Metres

This hole was designed to test for a northern extension of the Tommy Vein, some 360 metres north of DDH 95-26, the most northerly drill hole completed by Teck targeting the Tommy Vein. That hole intersected the microdiorite sill at the approximate location of the Tommy Vein, and as such is assumed to have “silled out”. No other work had been completed to test below the microdiorite sill where, as it comes to surface up dip, approximately between Lines 52 and 55 N, there was significant potential to expand the known strike length of the vein system

The hole, as anticipated, collared into microdiorite sill between 15.24 and 19.70 metres, before encountering the host rhyolite quartz-feldspar porphyry (“RQFP”) unit. This unit, as has been typical of all previous drilling on the Tommy Vein, comprised the remainder of the hole, with varying degrees of alteration intensity and veining.

The hole encountered the probable extension of the Tommy Vein system from 38.70 to 42.80 metres, and 49.45 to 53.60 metres. The first intersection was more intensely silicified wallrock, cut by narrow quartz-

carbonate veining to 20% of the interval. The second interval contained true quartz veins to 1.15 metres, within a broader interval of intense silicification, brecciation, and zones of strong fault gouge, indicating there may have been continued post vein movement along structural controls to vein emplacement.

Some 37 samples were split for analysis in the hole. Nine samples were from the two zones noted above, with the remainder from smaller isolated zones of alteration and narrow veining within the thick RQFP sequence. No significant gold or silver grades were returned from the hole. The best individual assay was 0.20 gpt (200 ppb Au) from a 1.35 metre section of the quartz vein, from 49.50 to 50.80 metres.

ii) **DDH TS-02-83**

Collar Location: L53+04N, 51+30E

UTM Co-ordinates: (NAD 83) 363748E, 5877459N

Azimuth/Dip: 270/-50

Length: 194.77 Metres

This hole was designed to test the northern extension of the Tommy Vein at an intermediate point between the intersection in Hole TS-02-82, and the most northerly previous drilling by Teck. As such, the hole was collared some 200 metres south of TS-02-82, and 160 metres north of Teck hole 95-26.

The hole collared into and penetrated a 124.8 metre section of sill, before encountering the host RQFP. The Tommy Vein system was encountered between 142.83 and 147.77 metres, comprised of an intensely silicified and brecciated stockwork zone between 142.83 and 143.22 metres, and a true vein between 143.22 and 147.77 metres. Minor stockwork veining extended into the host RQFP between 147.77 and 150.6 metres.

Thirty six samples were split for analysis. Ten samples were from the Tommy Vein system, and the remainder from zones of patchy alteration and veining elsewhere within the thick RQFP sequence. Assay results were anomalous in both gold and silver, with the Tommy Vein returning 0.68 gpt Au and 7.21 gpt Ag over 4.55 metres from 143.22 to 147.77 M.

iii) **DDH TS-02-84**

Collar Location: L49+60N, 50+20E

UTM Co-ordinates: (NAD 83) 363638E, 5877137N

Azimuth/Dip: 270/-50

Length: 48.48 Metres

This hole was designed to test the Tommy Vein within previously drill defined limits, but in an area of significant gaps in the longitudinal section. In the immediate vicinity of the hole, surface trench values had returned moderate grades over appreciable widths (See Appendix 4), including, in Trench 7, 2.6 gpt Au over 5.0 metres, and in Trench 10, 7.3 gpt over 3.1 metres. Drilling within this area had returned lower results, with hole 95-01 intersecting 0.154 gpt over a true width of 1.3 metres, and hole 95-02 intersecting 0.65 gpt over a true width of 0.8 metres.

The hole intersected the Tommy Vein between 32.30 and 36.40 metres (4.1 metres, and 2.62 metres true width), within a much broader zone of altered, bleached and stockwork veined RQFP between 27.60 metres and 37.80 metres.

Thirty samples were split for analysis, both from the Tommy Vein and surrounding zones of alteration. Analytical results were low. The Tommy Vein itself returned 0.61 gpt Au and 7.3 gpt Ag over 3.0 metres (1.92 metres true width). This intersection is consistent with surrounding drill intersections, and demonstrates that along the strike of the defined vein system, there is considerable grade and thickness variation.

iv) **DDH TS-02-85**

Collar Location: L47+23N, 50+38E

UTM Co-ordinates: (NAD 83) 363664E, 5876877N

Azimuth/Dip: 270/-43

Length: 60.70 Metres

This hole was also drilled within the previously defined limits of the Tommy Vein, again at a location where a large gap in the longitudinal section required in-filling (see Appendix 3). The hole was drilled approximately midway between two strong holes, 95-19 (8.3 gpt Au over a true width of 7.2 metres), and 95-05 (5.9 gpt Au over a true width of 8.0 metres). The hole was also drilled on section with, and approximately 45 metres above Teck hole 95-08, which returned 5.5 gpt over a true width of 3.2 metres.

The hole intersected the Tommy Vein from 22.3 to 30.2 metres, for an estimated true width of 5.78 metres. Over that interval, the vein averaged 4.53 gpt Au, and 28.53 gpt Ag. A narrower interval of 5 metres (3.66 metres true) graded 6.38 gpt Au and 35.6 gpt Ag, between 23.0 and 28.0 metres down-hole. In addition to the main Tommy Vein, a narrow zone of quartz-carbonate veining within altered RQFP, from 17.0 to 19.0 metres down-hole, returned anomalous values of 1.16 gpt Au and 5.0 gpt Ag. A total of 31 samples were split and submitted for analysis from the hole.

v) **DDH TS-02-86**

Collar Location: L47+00N, 52+67E

UTM Co-ordinates: (NAD 83) 363891E, 5876847N

Azimuth/Dip: 270/-45

Length: 106.4 Metres

This hole was designed to test for a possible southern extension of the Larry Vein, 100 metres south of Teck holes 96-55, 98-77, and 98-78. Results from those three holes were weak. Hole 96-55 failed to intersect significant veining, and instead encountered strong fault gouge in proximity to the anticipated trace of the Larry Vein. Hole 98-77 encountered the vein, and returned an intersection of 2.9 gpt Au over a true width of 4.4 metres. Hole 98-78 also encountered the vein, returning 5.1 gpt across a true width of 2.9 metres.

Hole TS-02-86 intersected a thick sequence of strongly fault broken to brecciated RQFP, with sporadic zones of silicification and thin stockwork veining. No appreciable thickness of vein material was encountered, and no significant results were returned from the 25 samples split for analysis. Based on this hole, and the previous results from the Larry Vein, it no longer represents a target with significant tonnage potential.

vi) **DDH TS-02-87**

Collar Location: L53+04N, 51+30E

UTM Co-ordinates: (NAD 83) 363748E, 5877459N

Azimuth/Dip: 300/-50

Length: 203.45 Metres

This hole was collared at the same location as TS-02-83, and the hole azimuth turned 30 degrees to the north (300 degrees) to cut the projected northern extension of the Tommy Vein approximately 50 metres further to the north. This approach was used, as opposed to constructing a new access road and drill pad on

L53+50N, due to the extremely swampy nature of the terrain at 53+50N, and to minimize the amount of disturbance and timber removal required to create additional drill access.

As anticipated, the hole collared into the microdiorite sill from 13.7 metres to 108.1 metres, and then encountered RQFP for the remainder of the hole. The Tommy Vein was intersected between 169.68 and 170.56 metres, within a broader zone of bleaching and brecciation within the RQFP, from 159.13 to 173.39. A zone of strong fault gouge, from 170.56 to 170.66, appears to have offset, or destroyed much of the Tommy Vein, with the gouge zone containing an appreciable amount of small quartz vein fragments. The extremely thin intersection, with a true width of only 0.53 metres, illustrates the degree to which post vein structural displacement and/or degradation can occur over even short distances along the strike.

Sixteen samples were split for analysis from the hole, from the vein and surrounding alteration and breccia zones within the RQFP, and from a few smaller zones of alteration elsewhere down hole. No significantly anomalous gold values were returned, with a maximum sample value of 90 ppb.

vii) DDH TS-02-88

Collar Location: L55+00N, 51+30E

UTM Co-ordinates: (NAD 83) Not collected in the field, due to difficulties in signal reception.

Azimuth/Dip: 240/-50

Length: 182.6 Metres

This hole was collared some 50 metres east of the collar location for TS-02-82, and on the drill trail to that pad location. Again, the head was turned 30 degrees, this time southwards to 240 degrees, to test the projected extension of the Tommy Vein some 50 metres to the south of the intersections encountered in Hole TS-02-82. As with Hole TS-02-87, this approach was used to lessen environmental impact, and because of very wet ground conditions south of L55+00N, which precluded additional access trail construction.

The hole collared into microdiorite sill for six metres, before encountering a thick sequence of largely unaltered RQFP. The Tommy Vein was encountered between 154.23 and 161.50 metres, with some associated silicification and veining in RQFP from 161.50 to 164.50 metres. Encompassing the Tommy Vein intersection, unexpectedly, were thin dykes (or sills?) of microdiorite, from 145.0 to 154.23 metres, and from 164.5 to 165.5 metres. Also encountered in the hole, from 140.50 to 141.50 metres, was a zone of intense fault gouge, confirming a local structural complexity along the Tommy Vein system as suggested by intersections in TS-02-87 and TS-02-82.

Thirty-eight samples were split for analysis, from both the Tommy Vein system and surrounding zones of brecciation and alteration. No significantly anomalous gold values were returned, with the highest individual assay of 100 ppb.

viii) QAQC Controls In Place During This Drilling Program

During the drilling program, representatives of Southern Rio monitored the drilling, core recovery, and core handling on a regular basis, and at least twice daily during regular drill shift changes. All core was picked and brought to Southern Rio's core logging and sampling facility by Southern Rio personnel. Similarly, all core was logged and sampled by Southern Rio personnel.

Bagged samples were sealed in Rice Bags for shipment to Eco-Tech Laboratories in Kamloops by bus from Vanderhoof. Southern Rio personnel delivered the samples to the bus station in Vanderhoof, and the samples were then delivered directly to the Eco-Tech Lab in Kamloops.

Within the sample submitted, Southern Rio routinely inserted "blank" samples known to contain no appreciable quantities of gold or silver mineralization. The barren microdiorite dyke was utilized for this purpose, with metre sections split and inserted into the sample sequence, approximately every ten to fifteen samples. All blanks inserted by Southern Rio appear on the respective logs. No anomalous and therefore erroneous gold or silver values were returned from any of the blank samples.

Eco-Tech, as part of their own QAQC program, routinely re-split from reject and analyzed approximately every 35th sample. They also routinely and randomly re-assayed pulps, and re-assayed any samples with significantly anomalous gold values. Finally, Eco-Tech systematically inserted certified gold and silver standards at the end of every 40 sample run, and compared their own analytical results with those of the standards. In all cases, the standard and check assays were in excellent agreement. Southern Rio is currently in the process of re-assaying from rejects several samples from the drilling program at a second laboratory, as a final QAQC measure.

10. DETAILED COST STATEMENT

Costing for this report was determined by summing all expenditures related to the entire diamond drilling program, and then determining the pro-rata portion of those costs applicable to Tsacha based the following formula;

Total metres drilled in 2002 program:	1312.3
Metres drilled on Tsacha:	951.6
Metres drilled on Tam:	360.7
Pro-rata Portion of Costs for Tsacha:	$951.6/1312.3 \times 100 = 72.51\%$

Direct Drilling Costs (as Invoiced by Hy-Tech Drilling)

Invoice 360: Holes TS-02-82, 84, 85 and 86, and related support costs, including mobilization.

Total Amount: \$43,567.54

Invoice 366: Holes TT-02-10, 11, 12, 13 and TS-02-83, 87 and 88, and related support costs, including demobilization.

Total Amount: \$84,385.47

Total Invoiced Drilling Costs: \$127,953.01

Portion Applicable to Tsacha: \$92,778.73

Geological Consulting Costs: (Includes Target Selection, Logging, Report Preparation, and Management Supervision)

McIvor Invoices:

Office Rate of \$275 per Day:

Sept 16-20, Sept 30-Oct 04, Oct 07-08 (Drill Target Selection, Permitting, and other Preparation)

Nov 1, Nov 4-8, Nov 11-15, Nov 18-20 (Analyze Results, Internal Reports, Assessment Reports)

26 Days at \$275 \$7,150

Plus GST: \$500.50

Field Rate of \$300 per Day:

Oct 09-31 (Drill Supervision); 23 Days at \$300 \$6,900

Plus GST: \$483

Total McIvor Invoices: \$15,033.50

Portion Applicable to Tsacha: (x72.5%) \$10,899.29

Weicker Invoices:

(Robert Weicker is Southern Rio's Senior Consulting Geologist, who was on site during the period October 10 through 15, and was also involved in the planning and post-drilling interpretive stages of this program.)

As billed to Southern Rio: \$5,591.00

Portion Applicable to Tsacha: \$4,053.48

McLaughlin Invoices:

(Doug McLaughlin is a consulting geologist who assisted on-site during the period October 16 through 31.)

As billed to Southern Rio:	\$4,800.00
Portion Applicable to Tsacha: (x72.5%)	\$3,480.00
 Total Geological Consulting Applicable to Tsacha Property:	 \$18,432.77

Camp Construction and Support Costs

As invoiced by CJL Enterprises; Costs to set-up and maintain a 6 man camp during the period October 16 through 31, and to set-up a core logging facility from October 10 through 31, including groceries, an initial fuel cache, generator rental, and other miscellaneous field support costs;

Total Invoice:	\$14,414.12
Portion Applicable to Tsacha: (x 72.5%)	\$10,450.24

Other Accommodation Costs

Accommodation at Plateau Lumber Camp at KM 102, Kluskus Road, for 7 men during the period October 10 through 16, during initial drilling and camp construction; as invoiced by Plateau Forest Products.

As billed by Plateau Forest Products:	\$3,063.20
Portion Applicable to Tsacha:	\$2,220.82

Field Support Costs**McIvor Expense Accounts:**

Miscellaneous Field Supplies, October 07, 2002	\$2,050.00
Miscellaneous Field Costs (Fuel, Tires, Sample Shipping, Warehouse Rentals, Satellite Phone Rental and Calling Costs, etc.), November 13, 2002	\$2,955.13
Total McIvor Field Expenses:	\$5,005.13
Portion Applicable to Tsacha: (x 72.5%)	\$3,628.72

McLaughlin Expense Accounts:

Miscellaneous Field Costs:	\$814.02
Portion Applicable to Tsacha:	\$590.16

Bottomer Expense Accounts:

Miscellaneous Field Costs, October	\$1,254.57
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Portion Applicable to Tsacha: (x 72.5%)	\$909.56
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Vehicle Rental Charges (as Invoiced by Bowmac, Prince George):	\$6,304.40
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Portion Applicable to Tsacha:	\$4,570.69
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Saw Rental and Blade Purchase (as billed by Pothier Enterprises):	867.50
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Portion Applicable to Tsacha:	\$628.94
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Miscellaneous Food, Fuel and Supplies as Invoiced by Vanderhoof Co-op:	\$2,299.19
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Portion Applicable to Tsacha:	\$1,666.91
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Total Field Support Costs Applicable to Tsacha:	\$11,994.98
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Analytical Costs (as Invoiced by Eco-Tech Laboratories)

Sample Bags and Rice Shipping Bags:	\$321.75
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Portion Applicable to Tsacha (72.5%)	\$233.27
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On Tsacha Only;

213 Samples (Fire Assay Gold and Silver) at 20.23 per sample;	\$4,308.99
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Plus GST:	\$301.63
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Sub-Total:	\$4,610.62
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Total Tsacha Analytical Costs:	\$4,843.89
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Other Report Writing Costs

Plan Map and Section Drafting, as Invoiced by Ibex Drafting:	\$2,600.00
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Data Entry (Diamond Drill Logs) as Invoiced by K. McNair Associates:	\$428.00
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Sub-Total:	\$3,028.00
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Portion Applicable to Tsacha: (x72.5%)	\$2,195.30
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Reclamation and Remediation Costs

Contract with James Chadwell to buck up and lay-down all trees knocked down during drill access trail and drill pad construction.

Total Amount:	\$4,000.00
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Portion Applicable to Tsacha:	\$2,900.40
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Total 2002 Drilling Program Costs Applicable to Tsacha:

\$145,817.13

11. CONCLUSIONS

The 2002 diamond drilling program on the Tsacha Property successfully identified extensions of the Tommy Vein from between 200 and 400 metres north of previously defined limits, and as such significantly expanded the target size and tonnage potential. None of the four intercepts along the newly defined northern extension returned economic gold grades or widths. These results indicate that gold distribution along the vein system is not uniform, and as is typical in most all precious metal vein deposits, grade is often restricted to "shoots" controlled by structural, chemical, or physical parameters that require detailed geological work to fully understand. Given the potential up-side in terms of deposit economics through the discovery of one or more ore shoots similar to the Tommy Vein system between Lines 45+50 and 49+00N, additional exploration of the northern extension of the Tommy Vein is warranted, both along strike and at depth. Prior to additional drilling, a program of detailed geological mapping and prospecting is warranted along the northern strike projection of the vein system. Although largely till covered, float identification and sampling has proven to be an effective exploration tool on this and adjacent properties.

12. REFERENCES

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13. CERTIFICATE OF AUTHOR

I, Duncan F. McIvor, do hereby declare that;

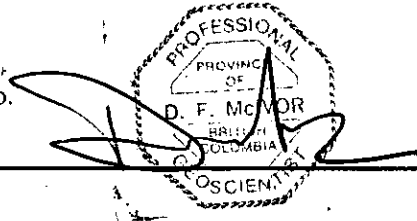
- 1) I am currently a self-employed consulting geologist with an office at 5429 River Road, Delta, B.C., V4K 1S8, in British Columbia, Canada.
- 2) I graduated with an Honours Bachelor of Applied Science (Earth Sciences) from the University of Waterloo in 1983.
- 3) I am a member of the Association of Professional Engineers and Geoscientists of British Columbia, Registration Number 19922
- 4) I have worked as a geologist for a total of 20 years since graduation from University, and prior to graduation, as a student and or geo-technician for a period of 9 additional years.
- 5) I have read the definition of "Qualified Person" set out in National Instrument 43-101("NI 43-101") and certify that by reason of my education, affiliation with a professional association and past relevant work experience, I fulfill the requirements to be a "Qualified Person" for the purposes of NI 43-101.
- 6) I am solely responsible for the preparation of this report. I was on site at the Tsacha Property during the period October 09 through November 1, 2002, and oversaw all drilling, logging, and sampling on the property.
- 7) I am not aware of any material fact or material change with respect to the subject matter of this report, the omission to disclose which makes this report misleading.
- 8) I am not independent of the issuer applying all tests in Section 1.5 of NI 43-101 in that I currently own securities in Southern Rio Resources. Other than by normal fee for supervising the drilling program summarized herein, and for the preparation of

this report, I do not expect to receive any benefits from Southern Rio Resources including any specific interest in the property or any specific securities of the company.

- 9) I have read NI 43-101 and Form 43-101F1, and this report has been prepared in compliance with that instrument and form.
- 10) I consent to the filing of this report with any stock exchange or regulatory authority and any publication by them, including electronic publication in the public company files on their websites accessible by the public.

Dated this 29th day of November, 2002

Duncan McIvor, P. Geo.



APPENDIX 1

DIAMOND DRILL LOGS

DIAMOND DRILL LOG				HOLE: TS-02-82															
NORTHING:		L55+00N		AZIMUTH: 270 °		STARTED: Oct. 14, 2002		LENGTH: 155.20											
EASTING:		50+80E		DIP: - 50°		COMPLETED: Oct. 16, 2002		CORE SIZE: BQTW											
ELEVATION:				DIP TESTS: -48° at 76.20 M, and -48° at 155.2 M		LOGGED: October, 2002													
SECTION:						LOGGED BY: Duncan McIvor													
PURPOSE:		Test possible northern extension of Tommy Vein																	
LITHOLOGY				SAMPLES															
MAJOR UNIT		MINOR UNIT		DESCRIPTION	SAMPLE NUMBER	FROM	TO	LENGTH (m)	Au (1) g/t	Au (2) g/t	Au (3) g/t	Au (4) g/t	Au g/t FINAL	Ag (1) g/t	Ag (2) g/t	Ag (3) g/t	Ag (4) g/t	Ag g/t FINAL	
FROM	TO	FROM	TO																
0.00	15.24			OVERBURDEN															
				-Between 9.24 and 15.24 m, cored through numerous large boulders of microdiorite															
15.24	19.70			MICRODIORITE SILL															
				- vfg, light grey, homogenous microdiorite															
				- very weakly frac, all orientations, with minor calc frac filling															
				- a few frags have oxidation halos, with minor limonite															
				- no significant veining, alteration or mineralization															
				- contact with underlying RQFP @ 50 ° to core axis															
19.70	24.90			RHYOLITE QUARTZ FELDSPAR PORPHYRY	16589	21.30	22.30	1.00	<0.03				<0.03	0.1				0.1	
				- RQFP - pinkish red to grey-green rhyolite groundmass with 20-25% 1-3mm fspar phenox, 5% small quartz phenox	16590	22.30	23.30	1.00	<0.03				<0.03	0.1				0.1	
				- strongly fractures, with dominant orientations @ 0 °, 40° to ca and locally with qtz, carb frac fill and strong oxidation on fractures	16591	23.30	24.30	1.00	<0.03				<0.03	0.2				0.2	
				- weak to mod (in places) silicification, and grey-green bleaching in places, as halos around qtz-carb veining of ~5% and 1-2cm - in places qtz-carb veins weakly brecciate host rock	16592	24.30	24.90	0.60	<0.03				<0.03	0.1				0.1	
				- between 19.7-21.0m, numerous oxidized 5mm - 1cm qtz-carb vns @ 0° to ca locally brecciate host															
				- from 21.30 - 21.80 locally moderately silicified															
				- from 21.80 - 22.30, blocky, very strongly fractured zone (fault)															
				- from 22.30 - 24.90, moderately silicified as patchy alteration that partially obliterates porphyry texture															
				- contains trace disseminated reddish-brown sph(?) and vfg black Mn (?) on frags															
24.90	25.40			QUARTZ VEIN	16593	24.90	25.40	0.50	<0.03				<0.03	0.1				0.1	
				- 50cm grey (chalcedonic, occasionally banded) to white qtz vein	16594	Blank			<0.03				<0.03	0.1				0.1	
				- contacts at low angle (20-30° to ca) - vn is very strongly fractured, with secondary silica, carb, and reddish-brown to black vfg hematite as frac filling - very similar in appearance to Tommy Vein															
25.40	32.80			VARIABLY SILICIFIED, QTZ-CARB VEINED RQFP	16595	25.40	26.60	1.20	<0.03				<0.03	0.2				0.2	
				- light grey to pinkish grey RQFP, as previously described	16596	26.60	27.80	1.20	<0.03				<0.03	0.3				0.3	
				- unit contains moderate (to strong, in places) but patchy silicification as halos on numerous (to 10%) 1-5cm qtz +/- minor Fe carb/calc veins throughout unit - where silicified, porphyritic texture is partially obliterated	16597	27.80	28.80	1.00	0.03	0.05			0.04	0.3	0.3			0.3	
				- contains trace hem/sph? as frac filling, usually within qtz veins	16598	28.80	29.90	1.10	<0.03				<0.03	0.2				0.2	
				- @26.0, 2cm qtz carb vn @ 25 ° to ca	16599	29.90	31.00	1.10	<0.03				<0.03	0.2				0.2	
				- @27.0, 10cm patch of qtz (vn) @ 0° to ca with strong hem frac fill	16600	31.00	32.20	1.20	<0.03				<0.03	0.7				0.7	
				- from 27.80 to 28.80, core is ~50% qtz (minor carb) vein material - vn @ 0-20° to core axis - surrounding host rock is strongly silicified															
				- from 28.80 to 30.50, strongly fractured, oxidized, blocky zone															
				- from 30.50 to 30.65, 15cm long qtz-minor carb vein @ 0° to core axis															
				- from 32.30 to 32.80, locally less altered															
				- sharp contact with microdiorite dyke @ 70° to core axis															

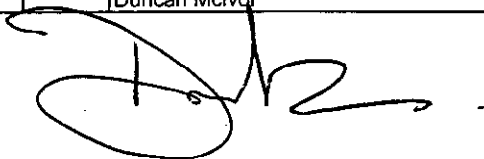
GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

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DIAMOND DRILL LOG					HOLE: TS-02-32		PAGE 2 OF 4		SAMPLES										
LITHOLOGY					SAMPLE NUMBER	FROM	TO	LENGTH (m)	Au (1) g/t	Au (2) g/t	Au (3) g/t	Au (4) g/t	Au g/t FINAL	Ag (1) g/t	Ag (2) g/t	Ag (3) g/t	Ag (4) g/t	Ag g/t FINAL	
MAJOR UNIT	FROM	TO	MINOR UNIT	DESCRIPTION															
	32.80	33.60																	
	33.60	38.70																	

DIAMOND DRILL LOG					HOLE: TS-02-82		PAGE 3 OF 4		SAMPLES											
LITHOLOGY		MAJOR UNIT		MINOR UNIT		DESCRIPTION	SAMPLE NUMBER	FROM	TO	LENGTH (m)	Au (1) g/t	Au (2) g/t	Au (3) g/t	Au (4) g/t	Au g/t FINAL	Ag (1) g/t	Ag (2) g/t	Ag (3) g/t	Ag (4) g/t	Ag g/t FINAL
FROM	TO		FROM	TO																
53.60	131.00				RHYOLITE QUARTZ FELDSPAR PORPHYRY															
					- very homogeneous unit, pred. brick red to light red groundmass with 10-15% fspar phenox, 5-7% qtz phenox															
					- coarsely fragmented in places, with agglomerate frags to 2cm of variable composition															
					- only weakly fractured, @ all orientations, with pred. calc, occasional qtz frac fill - a few more strongly fractured to wkly brecciated zones, but uncommon															
					- rare 1-5cm calc, occasional qtz calc veins															
					- occasional 5-10cm greyish-green zones of weak bleaching															
					- no significant sulphides, alteration or veining															
					- @ 65.60, 2cm calc minor qtz vein @ 20° to core axis, with minor black tourmaline? fracture filling															
					- from 68.30 - 68.50, a few thin calc qtz stringers weakly brecciate RQFP															
					- @ 72.10, 1cm qtz calc vein @ 45° to core axis															
					- from 75.30 - 75.50, weakly brecciated by narrow (2mm) qtz calc stringers															
					- from 78.20 - 78.50, a few 1-3cm qtz carb veins @ 30-45° to core axis with 5cm bleached alteration halos locally containing trace diss. vfg Py															
					- from 89.80 - 90.10, locally brecciated by numerous 2-3cm calc-minor Fe carb/sil veins with trace associated Py															
					- @ 92.90, 10cm breccia zone in calc-minor qtz-Fe carb matrix	16614	96.00	97.00	1.00	<0.03	0.03	<0.03		<0.03	0.2	0.4	0.2			0.3
					- @ 95.30, 5cm qtz carb breccia zone and a few 1cm qtz vein frags in "blocky" zone	16615	97.00	98.00	1.00	<0.03				<0.03	0.2					
					- from 96.00 - 99.20, locally 5mm - 1cm grey chalc qtz veins @ 50-60° to core axis and 25% of unit weakly brecciate host - some associated weak silicification as halos on veins	16616	98.00	99.20	1.20	<0.03				<0.03	0.2					
					- from 100.30 - 100.40, a few 0.5mm chalc qtz veins @ 30-40° to core axis with 1-2% hem (spec?) on vein margins															
					- @ 102.50, 5cm breccia zone healed by grey chalc-qtz and calc															
					- @ 105.10, 2cm chalc-qtz vein @ 40° to core axis															
					- @ 105.85, 1cm chalc-qtz vein @ 60° to core axis, with 2% red hem? on margins															
					- @ 112.90, 1cm chalc-qtz vein @ 45° to core axis with a few blobs black tm															
					- @ 114.50, 10cm zone of 1-2cm chalc qtz veining and related silicification of wallrock	16617	114.00	115.00	1.00	<0.03				<0.03	<0.1					
					- @ 115.00, a few 2-3cm breccia zones healed by qtz-carb	16618	123.00	125.00	2.00	0.08				0.08	0.3					
					- from 118.6 - 118.8, 20cm greyish green bleached zone	16619	125.00	127.00	2.00	<0.03				<0.03	0.3					
					- from 123.00 onwards (to 131.00), becomes increasingly fractured with chalc silica carb frac fill - narrow (5mm) qtz carb veinss increase to 5%, with weak associated alteration (sil) halos	16620	127.00	128.00	1.00	<0.03				<0.03	0.5					
					- from 128.30 - 128.50, 20cm chalc grey qtz + white qtz + calc + Fe carb vein @ 45° to core axis	16621	128.00	129.00	1.00	<0.03				<0.03	0.4					
					- from 130.40 - 131.00, becomes intensely bleached (but not silicified) as contact alteration with underlying sill/dyke	16622	129.00	131.00	2.00	<0.03				<0.03	0.1					
131.00	135.80				MICRODIORITE DYKE/SILL	16623	132.90	133.40	0.50	<0.03	<0.03			<0.03	<0.1	<0.1				<0.1
					- light grey, vfg microdiorite dyke or narrow sill - appears "banded" in places due to prominent frac set @ 45° to core axis															
					- microdiorite has been strongly "bleached" to a tan colour, in patches to 30-40cm, usually around prominent calcite-filled fractures - sharp contacts with rhyolite unit @ 45° to core axis															
					- from 132.90 - 133.40, inclusion of intensely brecciated, altered RQFP - host frags to 2-3cm in calcite +/- silica matrix															

DIAMOND DRILL LOG						HOLE: TS-02-82						PAGE 4 OF 4									
LITHOLOGY						SAMPLES															
MAJOR UNIT		MINOR UNIT		DESCRIPTION		SAMPLE NUMBER	FROM	TO	LENGTH (m)	Au (1) g/t	Au (2) g/t	Au (3) g/t	Au (4) g/t	Au g/t FINAL	Ag (1) g/t	Ag (2) g/t	Ag (3) g/t	Ag (4) g/t	Ag g/t FINAL		
FROM	TO	FROM	TO																		
135.80	140.60			BLEACHED RQFP																	
				- as previously described, but bleached a tan to buff colour (contact alteration with narrow dyke/sill)																	
				- locally 5% 5mm-2cm black ferromag min frags																	
				- no significant veining or mineralization																	
140.60	155.20			RQFP		16624	151.00	152.00	1.00	<0.03				<0.03	0.1				0.1		
				- as previously described, groundmass locally light reddish grey - contains a few thin bleached sil-ser-carb alteration zones, notably between 151.00 and 151.80m		16625	blank			<0.03				<0.03	0.1				0.1		
				EOH @ 155.2m October 17, 2002																	
				Duncan McIvor																	



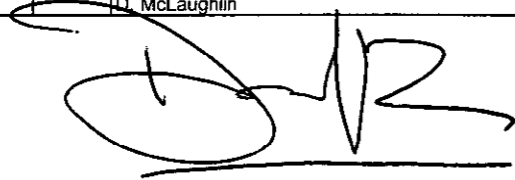
DIAMOND DRILL LOG						HOLE: TS-02-83														
NORTHING:		L53+04N		AZIMUTH: 270 °		STARTED:		Oct. 16, 2002		LENGTH:		194.77								
EASTING:		51+30E		DIP: - 50 °		COMPLETED:		Oct. 18, 2002		CORE SIZE:		BQTW								
ELEVATION:				DIP TESTS: -50° at 91.5 M, and -47° at 194.77 M		LOGGED:		Oct. 18, 2002												
SECTION:						LOGGED BY: A.D. McLaughlin														
PURPOSE:						Test north extension of Tommy Vein														
LITHOLOGY						SAMPLES														
MAJOR UNIT		MINOR UNIT		DESCRIPTION		SAMPLE NUMBER	FROM	TO	LENGTH (m)	Au (1) g/t	Au (2) g/t	Au (3) g/t	Au (4) g/t	Au g/t FINAL	Ag (1) g/t	Ag (2) g/t	Ag (3) g/t	Ag (4) g/t	Ag g/t FINAL	
FROM	TO	FROM	TO																	
					Note: 40' casing left in hole, but snapped off by drillers during move. (D.Mc)															
0.00	10.61				CASING															
					- diorite fragments mainly															
10.61	124.79				MICRODIORITE															
					- light green, fine grained, massive, with weak banding below 59.00m - up to 30% dark to medium green chlorite/sericite altered mafic minerals in feldspar groundmass															
					- 1% aggregates feldspar <1cm (phenocrysts)															
					- 3% subrounded dark green fragments <1cm generally, rarely to 3cm - moderately magnetic with vfg diss magnetite <2.5mm, <0.5% groundmass altered to sericite, saussaurite, weak patchy silica															
					- <1% calcite microveins commonly 40-50°, occasionally 20-30°, weak fractured with minor sericite, ankerite?, Fe-oxides															
					- trace diss py in lower 3m															
					- from 124.00 - 124.79, grades into chill margin, weakly siliceous, <1% fg diss py, calcite-qtz vesicles to 2mm, elongate parallel banding															
					- @ 124.70, contact sharp, fractured @ 49°															
124.79	142.83				RHYOLITE QUARTZ FELDSPAR PORPHYRY															
					- medium red-brown, massive, coarse grained, poorly sorted															
					- 20-25% feldspar crystals, broken, angular to 3mm															
					- 5% siliceous lithic fragments <3cm sub-rounded, <5% quartz crystals <1mm in red-brown to locally grey aphanitic siliceous groundmass															
					- lithic frags often elongated (welded?) @ 70° giving unit banded look locally															
					Structure: mod. fractured with some Fe-oxides, sericite, calcite, clay chlorite, up to 5cm wide intervals with broken core															
					Alteration: med. silicified, pervasive and qtz microveins +/- calcite 20-30°, 60-70° orientations most common, weak chlorite after lithic fragments and in groundmass with qtz microveins below 139.60 @ 5-20°															
					Mineral: trace py, with or near qtz microveins															
					- from 131.46 - 131.50, qtz vein, minor calcite, Fe-carbonate?, possible vfg tourmaline, 35°															
					- from 135.13 - 135.25, qtz veins, "stockworks" @ 25°, minor chlorite, diss py cut by later qtz-calcite microveins	16626	141.86	142.83	0.97	<0.03				<0.03	0.5				0.5	
					- from 142.6 - 142.86, strongly silicified, pervasive and veins, primary texture obscured, lower contact @ 45°, str silicified, lithic fragments, trace pyrite															
142.83	143.22				RQFP BRECCIA	16627	142.83	143.22	0.39	<0.03									1.2	
					- grey to light orange, massive, 40% grey aphanitic silicified RQFP fragments to 8cm, angular, possible qtz vein fragments in less silicified RQFP groundmass, cut by qtz-calcite microveins															
					- light brown aphanitic silica veins (adularia?) with faint banding, lower contact gradational															

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DIAMOND DRILL LOG						HOLE TS-02-83		PAGE 2		OF 3											
LITHOLOGY						SAMPLES															
MAJOR UNIT		MINOR UNIT		DESCRIPTION		SAMPLE NUMBER	FROM	TO	LENGTH (m)	Au (1) g/t	Au (2) g/t	Au (3) g/t	Au (4) g/t	Au g/t FINAL	Ag (1) g/t	Ag (2) g/t	Ag (3) g/t	Ag (4) g/t	Ag g/t FINAL		
143.22	147.77			QUARTZ VEIN (TOMMY VEIN?)		16628	143.22	144.22	1.00	0.10				0.10	1.6				1.6		
				- massive, mottled white to light grey to orange brown, indistinct breccia texture locally		16629	144.22	145.22	1.00	0.22				0.22	1.9				1.9		
				- aggregates (<1cm) to microveins of hematite, with grey aphanitic to chalcedonic quartz, adularia microveins, also as indistinct breccia fragments after wallrock? or early vein		16630	145.22	146.00	0.78	1.27				1.27	15.2				15.2		
				- patchy light green sericite to chlorite, patchy calcite and as microveins with quartz, higher hematite in lower half of vein		16631	146.00	146.99	0.99	0.70	0.73			0.72	11.0				11.0		
				- @ 143.86: adularia? microveins with chalcedonic qtz in wallrock @ 30° cut by qtz-calcite microvein, vfg grey sulphide?		16632	146.99	147.77	0.78	1.39				1.39	9.5				9.5		
				- @ 145.88: hematite microvein @ 40° cut by qtz-calcite microvein @ 70°		16633	blank			<0.03				<0.03	0.1				0.1		
				- 1cm milky white qtz vein @ 30° partially rimmed by hematite and containing grey qtz vein fragments <1cm (or highly silicified wallrock) cut by qtz +/- calcite microveins @ 70-80°																	
				- from 146.00 - 146.92, intermittent fracture zones @ 45°, 10-30°, yellow adularia/Fe-oxides with weak sericite/clay																	
				- from 146.99 - 147.77, increased breccia fragments of strongly silicified wallrock fragments (RQFP)																	
				147.44 - 147.47: banded white to grey qtz vein, with amethyst in interior (filled in vug?), possible tourmaline band in centre																	
				146.32 - 146.47: vein breccia, strong hematite with pyrite																	
				- lower contact sharp @ 40°, well banded qtz veins with amethyst in lower 5cm parallel contact																	
147.77	150.60			RHYOLITE QUARTZ FELDSPAR PORPHYRY		16634	147.77	148.77	1.00	0.28				0.28	4.4				4.4		
				- as above RQFP but more altered, pale green to red		16635	148.77	149.80	1.03	0.08				0.08	0.7				0.7		
				Alteration: feldspars to saussurite? and chlorite, groundmass siliceous, 10% qtz veins, variably banded, chalcedonic, local amethyst +/- calcite, generally <1cm wide, 40-50°		16636	149.80	150.60	0.80	0.13				0.13	1.1				1.1		
				- minor sericite along fractures, up to 0.5% vfg pyrite in wallrock, adjacent qtz veins and along fractures decreasing downhole																	
				- @148.25: 1cm qtz vein @ 65°																	
				- from 148.41 - 148.45, qtz vein with hematite resembles main Tommy vein @ 40°																	
				- from 149.80 - 149.90, qtz vein, good banding on vein edges becoming massive in centre, lithic fragment enclosed, hematite stringers, parallel vein contact, vein @ 35°, dk grey qtz and sulphides (vfg) along fractures @ 30° perpendicular to vein and parallel to vein																	
150.60	160.20			RHYOLITE QUARTZ FELDSPAR PORPHYRY		16637	150.60	151.60	1.00	<0.03				<0.03	0.2				0.2		
				- moderately altered, light green to orange/brown, medium grained, massive to locally banded		16638	151.60	152.60	1.00	0.06				0.06	0.3				0.3		
				- up to 25% feldspar crystals <4mm subangular, 5% qtz crystals <3mm, <3% lithic fragments subangular up to 1cm in siliceous to sericitic groundmass, texture locally obscured by alteration		16639	152.60	153.25	0.65	0.05	0.04			0.05	0.3	0.3			0.3		
				Alteration: mod silica-sericite in groundmass, saussurite? sericite after feldspars and lithic fragments, disseminated hematite in groundmass and with veins locally		16640	153.25	154.14	0.89	<0.03				<0.03	0.1				0.1		
				Mineral and Veins: 7% white to grey banded to chalcedonic qtz veins <1cm, commonly at 70-80°, 20-30°, locally with calcite and light brown adularia?, mnr specular hematite veins <1mm and with qtz veins locally		16641	154.14	154.40	0.26	0.11				0.11	0.4				0.4		
				- from 153.11 - 153.25, multiple banded qtz veins and stockworks @ 35°, 10°, specular hematite		16642	154.40	155.40	1.00	0.06				0.06	<0.1				<0.1		
				- from 154.14 - 154.40, vein breccia, 30% grey, banded to chalcedonic qtz veins, with hematite stringers, str silicified wallrock, wallrock fragments, 40°		16643	155.40	156.40	1.00	<0.03				<0.03	0.1				0.1		
				- from 157.24 - 158.22, 5% specular hematite, veins to 2mm with qtz, calcite, cross-cut earlier qtz veins		16644	156.40	157.24	0.84	<0.03				<0.03	<0.1				<0.1		
						16645	157.24	158.22	0.98	<0.03				<0.03	<0.1				<0.1		
						16646	158.22	159.22	1.00	<0.03				<0.03	0.1				0.1		
						16647	159.22	160.20	0.98	<0.03				<0.03	1.6				1.6		
				Note: samples 16638 and 16648 are duplicate samples		16648	151.60	152.60	1.00	0.05				0.05	0.4				0.4		

DIAMOND DRILL LOG						HOLE: TS-02-83		PAGE 3		OF 3											
LITHOLOGY						SAMPLES															
MAJOR UNIT		MINOR UNIT		DESCRIPTION		SAMPLE NUMBER	FROM	TO	LENGTH (m)	Au (1) g/t	Au (2) g/t	Au (3) g/t	Au (4) g/t	Au g/t FINAL	Aq (1) g/t	Aq (2) g/t	Aq (3) g/t	Aq (4) g/t	Aq g/t FINAL		
160.20	194.77			RHYOLITE QUARTZ FELDSPAR PORPHYRY																	
				- red brown, massive to banded, coarse grained, same as above unit except less altered		16649	179.20	179.65	0.45	<0.03				<0.03	0.3				0.3		
				Alteration: wk silicified sericite		16650	179.65	180.65	1.00	<0.03				<0.03	0.4				0.4		
				Veins and Minerals: 2% banded qtz veins <1cm, 40-30°, +/- calcite		16651	180.65	181.78	1.13	<0.03				<0.03	0.5				0.5		
				- from 175.26 - 175.48, fault, gauge, fractured above for 60cm and below for 40cm, 40-50° with clay, chlorite		16652	181.78	182.17	0.39	<0.03				<0.03	0.3				0.3		
				- from 179.20 - 184.75, Vein Breccia Zone: 20% milky grey-blue qtz veins, vein breccia, after fragments and as aggregates in groundmass, up to 50% qtz in narrower vein breccia zones containing variably silicified wallrock fragments, clay-altered feldspars plus light green altered feldspars, rare hematite after fragments, , tr. pyrite, <1% qtz +/- calcite microveins cutting earlier blue-green quartzes, veins @ 20-30°, 40-50° (a few 70°), minor black-grey vfg sulphide		16653	blank			0.04				0.04	0.1				0.1		
				- from 179.65 to 180.65, vein breccia, upper contact @ 15°, lower contact gradational		16654	182.17	183.17	1.00	<0.03				<0.03	0.4				0.4		
				- from 181.78 - 182.17, vein breccia		16655	183.17	184.75	1.58	0.31				0.31	0.4				0.4		
				- from 187.36 - 187.48, multiple qtz veins <1cm @ 20°, with feldspar, altered wallrock to pale green feldspar or saussaurite-silica (rimmed by orange feldspar)		16656	184.75	185.25	0.50	<0.03	<0.03			<0.03	0.1	0.1			0.1		
				- from 188.13 - 188.29, vein breccia, 25% vein, siliceous wallrock, fragments but not strongly altered, mnr pyrite in wallrock		16657	187.30	187.80	0.50	0.04				0.04	0.3				0.3		
				- from 188.29 - 194.77, <4% qtz veins to 1cm		16658	187.80	188.80	1.00	<0.03				<0.03	0.2				0.2		
						16659	190.30	190.60	0.30	<0.03				<0.03	0.3				0.3		
						16660	192.00	192.50	0.50	0.03				<0.03	0.2				0.2		
						16661	193.50	194.50	1.00	<0.03				<0.03	0.2				0.2		
				EOH 194.77m October 19, 2002																	
				D. McLaughlin																	



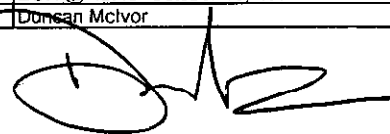
DIAMOND DRILL LOG				HOLE: TS-02-84															
NORTHING:		L49+60N		AZIMUTH: 270 °		STARTED:		Oct. 14, 2002		LENGTH:		48.48m							
EASTING:		50+20E		DIP: -50°		COMPLETED:		Oct. 14, 2002		CORE SIZE:		BQTW							
ELEVATION:				DIP TESTS: None - short hole		LOGGED:		Oct. 15, 2002		LOGGED BY:		Duncan McIvor							
SECTION:																			
PURPOSE:		Drill Test Tommy Vein																	
LITHOLOGY						SAMPLES													
MAJOR UNIT		MINOR UNIT		DESCRIPTION		SAMPLE NUMBER	FROM	TO	LENGTH (m)	Au (1) g/t	Au (2) g/t	Au (3) g/t	Au (4) g/t	Au g/t FINAL	Ag (1) g/t	Ag (2) g/t	Ag (3) g/t	Ag (4) g/t	Ag g/t FINAL
0.00	3.05			OVERBURDEN (CASING PULLED)															
3.05	19.50			RHYOLITE QUARTZ-FELDSPAR PORPHYRY (RQFP)															
				- light red to greenish grey RQFP															
				- mod. fractured pred @ 45° to core axis, but all orientations present															
				- aphanitic matrix of 20% fspar phenox, 5% qtz phenox															
				- locally blocky, and strong hem staining/oxidation on fracs															
				- no significant sulphides															
				- a few patchy zones of bleaching, carb alt (with some ser-sil), as noted below															
				- a few qtz calc veins from 5mm-1cm, pred @ 45° to core axis															
				- @ 9.15, 5mm chalc vein @45°, with 10cm bleached alt. halo															
				- @ 12.95, 5cm qtz-Fe carb-calc vein @ 50° to core axis, locally bleached															
				- @ 13.95, 7cm banded chalc. qtz-minor carb vein @ 50° to core axis, with trace Py		16558	13.70	14.20	0.50	<0.03				<0.03	0.1				0.1
		14.50	16.80	calc-minor qtz-Fe carb veining increases to 10% of unit, pred @ 45° and 20-30° to core axis		16559	14.50	15.50	1.00	<0.03				<0.03	0.1				0.1
				- @ 15.20, 2 cm chalc-calc vein @ 20°		16560	15.50	16.50	1.00	<0.03				<0.03	0.1				0.1
				- @ 15.90, 2cm chalc-calc vein @ 30°		16561	16.50	17.50	1.00	0.07				0.07	0.1				0.1
		16.40	16.60	locally moderately brecciated by calc, minor qtz veining		16562	blank			<0.03	<0.03			<0.03	<0.1	<0.1			<0.1
		17.00	17.30	a few 2cm qtz-carb veins @0°, 45°															
		18.00	19.00	bleached, with 1-2cm chalc qtz and calc veins @ 30-45° to ca															
				- @ 18.20, 2cm qtz-carb vein @ 45° to ca - same @ 19.40															
				- contact with underlying unit based on degree of bleaching															
19.50	27.60			BLEACHED ALTERED RQFP		16563	19.50	20.50	1.00	0.04				0.04	0.4				0.4
				- as above, but matrix/groundmass is light greyish green and strongly bleached, with mod. sil-minor ser-carb alteration		16564	20.50	21.50	1.00	<0.03				<0.03	0.3				0.3
				- porphyritic texture partially obliterated		16565	21.50	22.50	1.00	0.10				0.10	0.1				0.1
				- chalc. qtz-Fe carb-calc veining increases to 15% of unit - from <5mm to 10cm - veining increases in frequency towards 27.60		16566	22.50	23.50	1.00	<0.03				<0.03	<0.1				<0.1
				- veins often strongly brecciate host, and contain tr Py, hem		16567	23.50	24.50	1.00	<0.03				<0.03	0.5				0.5
				- prominent vn/fracture orientations are 45° and 10-20° to ca		16568	24.50	25.50	1.00	<0.03				<0.03	0.4				0.4
				- veins also often with minor black sulph?		16569	25.50	26.50	1.00	<0.03				<0.03	0.4				0.4
				- @ 24.80, , 10cm qtz carb breccia zone with 2% black vfg sulph?		16570	26.50	27.00	0.50	<0.03				<0.03	0.4				0.4
		25.10	25.40	chalc. qtz-carb veining to 50%, with strong silification of host		16571	27.00	27.60	0.60	0.05				0.05	4.6				4.6
		25.90	26.30	chalc. qtz-carb veins to 2cm and 30% of unit with strong silic of host															
		27.00	27.30	banded chalc qtz and minor Fe carb/calc veins @ 25° to ca to 40% - veins contain minor Py hematite															
				- contact with underlying unit based on vein contact and degree of alteration															
27.60	30.30			INTENSELY ALTERED, SILICIFIED RQFP, WITH 40% QTZ-CARB VEINING AND BRECCIA ZONES (PART OF TOMMY VEIN COMPLEX)		16572	27.60	28.30	0.70	0.23				0.23	77.4				77.4
				- RQFP becomes intensely silicified - porphyry texture largely obliterated - contains 40% chalcedonic qtz +/- Fe carbonate veins, to 25cm, at all orientations, but prod. @ 45° and 0-20° to core axis - veins often strongly brecciate host rock, with sil-carb as matrix to breccia		16573	28.30	28.70	0.40	0.11				0.11	11.0				11.0

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DIAMOND DRILL LOG					HOLE: TS-02-84					PAGE 2 OF 2													
LITHOLOGY										SAMPLES													
MAJOR UNIT		MINOR UNIT		DESCRIPTION	SAMPLE NUMBER	FROM	TO	LENGTH (m)	Au (1) g/t	Au (2) g/t	Au (3) g/t	Au (4) g/t	Au g/t FINAL	Ag (1) g/t	Ag (2) g/t	Ag (3) g/t	Ag (4) g/t	Ag g/t FINAL					
FROM	TO	FROM	TO																				
27.60	30.30			CONTINUED																			
				- veins contain minor blood red hem, minor vfg Py and minor (<<1%) vfg black mineral	16574	28.70	29.50	0.80	0.13				0.13	18.0				18.0					
		28.30	28.70	40 cm banded, brecciated chalcedonic qtz-Fe carb-minor calc vein, with hem, black MN? on fracs, and tr Py, possibly trace sphalerite	16575	29.50	29.90	0.40	0.08				0.08	1.9				1.9					
		29.50	29.90	- 40cm zone of 90% banded to brecciated qtz-carb veining	16576	29.90	30.90	1.00	0.07				0.07	0.3				0.3					
		30.20	30.90	- 60% chalc. qtz and Fe carb veining, to 5cm, pred. @ 0-20° to ca and locally with 0.5% reddish brown vfg sph? on fractures within veining - veins locally strongly brecciate silicified host rock	16577	30.90	31.50	0.60	0.11				0.11	1.1				1.1					
		31.10	31.50	banded chalc. qtz veins to 15cm @ 40° to ca with vfg black MN? sulph?, associated with carbonate healed fractures	16578	31.50	32.30	0.80	0.10				0.10	3.5				3.5					
					16579	blank			<0.03	<0.03			<0.03	<0.1				<0.1					
32.30	36.40			QUARTZ VEIN (TOMMY VEIN)	16580	32.30	33.30	1.00	0.69	0.73			0.71	10.4				10.4					
				- massive qtz vein - pred. light grey, chalc appearing, to white qtz - v. strongly fractured, @ all orientations, with prominent sets @ 45°, 20° to ca - fractures are healed with Fe carbonate (locally oxidized), and lesser secondary silica, hematite sericite	16581	33.30	34.30	1.00	0.81	0.85			0.83	7.5				7.5					
				- vein is brecciated in places, by later 1-2cm qtz-carb veins	16582	34.30	35.30	1.00	0.32				0.32	4.0				4.0					
				- contains a few 10-20cm inclusions of intensely silicified RQFP	16583	35.30	36.40	1.10	0.04				0.04	0.8				0.8					
				- contains only a few pin pricks Py and tr. black Mn on fracs - a few small blades of tourmaline noted in places																			
				- @ 36.20, 10cm wallrock (RQFP) inclusion with 0.5% Py																			
36.40	37.80			WEAKLY ALTERED, BLEACHED RQFP WITH 20% QTZ-CARB VEINS	16584	36.40	37.80	1.40	0.03				0.03	1.1				1.1					
				- RQFP, as before - weakly bleached, silicified, and with 20% 1-5cm pred. calc. minor qtz-Fe carb veins. @ 30-45° to ca - locally strongly oxidized, limonite stained - only tr. Py, Mn on fractures in veins	16588	36.40	37.80	1.40	<0.03				<0.03	1.3	1.3			1.3					
37.80	40.50			RHYOLITE QUARTZ FELDSPAR PORPHYRY (RQFP)																			
				- as before, from 3.05 - 19.50 - locally, groundmass is light greyish green - contains numerous (3-5%) 5mm-1cm lapilli to agglom. frags of similar composition - only a few thin (<1cm) pred. calc veins and zones of weak brecciation by calc., minor qtz-Fe carb stringers - only trace vfg disseminated Py																			
40.50	42.30			FAULT GOUGE	16585	40.50	42.30	1.80	<0.03				<0.03	<0.1				<0.1					
				- grey brown fault gouges, predom. clay with a few recognizable RQFP fragments, and minor qtz -carb vein fragments																			
42.30	42.80			BLEACHED RQFP	16586	42.30	42.80	0.50	<0.03				<0.03	<0.1				<0.1					
				- as before, but locally brownish grey, strongly bleached/leached from adjacent fault zone																			
42.80	48.80			RHYOLITE QUARTZ FELDSPAR PORPHYRY																			
				- locally coarser, with 10% 1-2cm agglomerate fragments																			
				- a few 1-2cm calcite veins, notably between 46.30-47.00, but no significant veining, alteration or mineralization																			

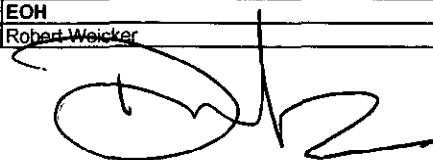


DIAMOND DRILL LOG				HOLE: TS-02-85																			
NORTHING:		L47+23N		AZIMUTH: 270 °		STARTED: Oct. 13, 2002		LENGTH: 60.7m															
EASTING:		50+38E		DIP: 43 ° on the head		COMPLETED: Oct. 14, 2002		CORE SIZE: BQTW															
ELEVATION:				DIP TESTS: No tests		LOGGED: Oct.15, 2002																	
SECTION:						LOGGED BY: Robert Weicker																	
PURPOSE:		Test Tommy Vein between surface and 95-08																					
LITHOLOGY						SAMPLES																	
MAJOR UNIT		MINOR UNIT		DESCRIPTION		SAMPLE NUMBER	FROM	TO	LENGTH (m)	Au (1) g/t	Au (2) g/t	Au (3) g/t	Au (4) g/t	Au g/t FINAL	Ag (1) g/t	Ag (2) g/t	Ag (3) g/t	Ag (4) g/t	Ag g/t FINAL				
FROM	TO	FROM	TO																				
0.00	9.10			CASING																			
				- miscellaneous boulder fragments, much sand this section, problems setting casing - day shift only 14m and casing Oct 13																			
9.10	14.20			RQFP																			
				- altered, light grey to yellow grey, intensely sericitic, altered phenocrysts, strongly argillic, weathered to 14.00, gouge and mud zones, possible fault or surface weathering, 13.60 - 14.20 intensely fractured, sheared, fault zone?		16528	14.00	15.00	1.00	0.01				0.01	0.1				0.1				
						16529	15.00	16.00	1.00	0.02				0.02	0.2				0.2				
14.20	17.60			RQFP		16530	16.00	17.00	1.00	0.04				0.04	0.5				0.5				
				- altered, strong sericite, moderate silica alteration, limonite fractures @ 60° CA, fp phenocrysts obscured by silica, qtz eyes 1-7mm, scattered qtz veinlets @ 40° CA		16531	17.00	18.00	1.00	1.55				1.55	9.0				9.0				
		17.10	17.40	- rubbly, block zone, fracture zone		16532	18.00	19.00	1.00	0.77				0.77	0.9				0.9				
		15.70	15.90	- fractured three 3-5mm qtz-cal veinlets 65° CA		16533	blank			NIL				NIL	0.1				0.1				
17.60	18.30			QUARTZ-CARBONATE VEIN AND RQFP (35-65%)																			
				- @17.6, mixed vein and volcanics, grey and white quartz, minor creamy white calcite (late), limonite fracture filling and clots																			
		17.90		- fracture, limonite @ 45° CA, 3cm silica hard																			
		18.10	18.30	- mixed vein and volcanic																			
18.30	19.40			ALTERED RQFP																			
				- with chlorite ff, grey with irregular netting and whisps chlorite ff		16534	19.00	20.00	1.00	0.10				0.10	0.9				0.9				
				- strong silica alt. obscures lapilli fragments and fspar phenox/sericite as blebs and ff,																			
				- 18.70 - 19.00, fractured 70-75° CA		16535	20.00	21.50	1.50	0.06				0.06	0.5				0.5				
19.40	21.50			ALTERED RQFP		16536	21.50	22.30	0.80	0.05	0.05			0.05	0.8	0.8	1.0		0.9				
				- as above, less chlorite and limonite ff, highly fractured, 40° CA																			
		19.60	20.00	- fault zone, next to dyke, gouge, upper CT 60° CA																			
		20.00	20.90	Dyke, rubbly broken core, fine grained, dk gray																			
		20.90	21.50	- as above, scattered brecciated calcite fragments in altered volcanic, strong sericite, bleached																			
21.50	22.30			DYKE																			
				- felsite, fine grained, dk grey, fractured and rubbly, blocky core																			
22.30	30.20			TOMMY VEIN SYSTEM		16537	22.30	23.00	0.70	1.92				1.92	5.5				5.5				
				- milky white to cloudy to grey qtz with white calcite fragments, irregular, pinkish to reddish ff and patches with sericite, also creamy, mixed with siliceous volcanic intervals, upper CT sharp next to dyke 70°, lower contact at 30.2 m at 60° to ca, followed by rubbly volcanics																			
		22.30	22.80	- 60% siliceous volcanic, 40% qtz veining, banding at upper CT @ 70° CA		16538	23.00	24.00	1.00	4.21				4.21	30.6				30.0				
		24.00		- banded feature or vein, limonite and sericite fracture filling streakings and patches		16539	24.00	25.00	1.00	8.86				8.86	30.6				30.6				
		25.60	26.00	- siliceous lapilli sections 25.60 - 25.70, 25.80 - 26.00, hematite brecciated vein frag @ 25.75		16540	25.00	26.00	1.00	6.69				6.69	42.8				42.8				

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DIAMOND DRILL LOG				HOLE: TS-02-85				PAGE 2 OF 2															
LITHOLOGY				SAMPLES																			
MAJOR UNIT		MINOR UNIT		DESCRIPTION	SAMPLE NUMBER	FROM	TO	LENGTH (m)	Au (1) g/t	Au (2) g/t	Au (3) g/t	Au (4) g/t	Au g/t FINAL	Ag (1) g/t	Ag (2) g/t	Ag (3) g/t	Ag (4) g/t	Ag g/t FINAL					
FROM	TO	FROM	TO																				
22.30	30.20			CONTINUED																			
		26.80	27.10	- brecciated vein fragments, dk grey silica frag and cloudy light grey, intensely siliceous RQFP																			
		27.80	28.80	mixed siliceous volcanic 60%, qtz vein 40%, intense sericite Fe carbonate, limonite fractures, more calcite filled fractures at 40° CA	16541	26.00	27.00	1.00	7.28				7.28	58.3				58.3					
		29.10	29.20	- fault/fracture, rubbly/broken core, vug	16542	27.00	28.00	1.00	4.87				4.87	16.4				16.4					
		29.20	29.30	- coll. banding qtz, minor vug	16543	28.00	29.00	1.00	1.32				1.32	10.5				10.5					
		29.90	30.20	- vuggy, fracture 25-26° CA, and 70° CA, limonite clots, and open space infillings in grey qtz, fine pyrite and calcite																			
					16544	29.00	30.20	1.20	1.02	0.96	0.99		0.99	8.2	0.1	8.2		5.5					
30.20	37.50			ALTERED RQFP																			
				- intensely sericitic, siliceous, yellowish grey to grey with cream-yellow altered phenocrysts and ff, 15-20% qtz veinlets, 1-6cm fine CaCO3 ff, limonite on fractures	16545	30.20	31.00	0.08	0.11				0.11	2.8				2.8					
		32.30	32.50	- rubbly core, slight core loss, fractured to 33-35° CA	16546	blank			<0.03				<0.03	0.1				0.1					
		34.00		- qtz vein 0.5cm, 35° CA	16547	31.00	32.00	1.00	0.05				0.05	2.4				2.4					
		35.10	36.60	- broken core, fractures, limonite, 15-20° CA, intense siliceous, yellow brown colour, qtz eyes 1-5mm, limonite ff/Fe carbonate	16548	32.00	33.00	1.00	0.15				0.15	2.4				2.4					
		36.30	37.00	- light pale grey colour, fracture limonite/chlorite along fractures, 15-45° CA	16549	33.00	34.00	1.00	0.08				0.08	1.2				1.2					
					16550	34.00	35.00	1.00	<0.03				<0.03	0.8				0.8					
37.50	54.50			RQFP																			
				- fresh reddish brown to greenish grey at 54.50, lapilli RQFP, altered sections with sericite/Fe carbonate and intensely siliceous with qtz carb veining where noted																			
		39.10	39.20	- qtz-carb vein 40-45° CA	16551	39.00	39.30	0.30	<0.03				<0.03	0.3				0.3					
		39.60	41.30	- fracture 10-15° CA, calcite ff and veinlet 10° CA, vuggy, limonite																			
		41.30	42.10	LOST CORE - GROUND CORE																			
		42.10	42.40	- DYKE - fault? gouge of felsite dyke																			
		43.80	43.90	- grey qtz vein, white -pinkish CaCO3 ff and veinlets, intensely siliceous, sparse fine pyrite	16552	43.00	44.30	0.70	0.06				0.06	0.9				0.9					
		44.30	47.00	QUARTZ VEINING - SILICEOUS ZONE, PYRITE - grey qtz veining, white qtz, intense siliceous lapilli RQFP - some veining 10° CA but contacts obscured, 2-3% very fine pyrite scattered-diss, pale green ff (chlorite, fuschite?) - Note: late fracture filling and veining is flat (>10° CA), however matrix intense siliceous with pyrite, with gradational contacts	16553	44.30	45.30	1.00	0.28	0.28			0.28	0.8	0.8			0.8					
		47.50	48.50	- distinct, white qtz-carbonate veinlets 5-15mm @ 10-15° CA	16554	45.30	46.30	1.00	0.04				0.4	1.2				1.2					
		48.80	49.00	- fault, limonite stain, gouge on fractures @ 30° CA	16587	45.30	46.30	1.00	0.05				0.05	1.1				1.1					
		49.00	53.00	- RQFP - grey-green colour, large angular chloritic, green coloured fragments, up to 6 cm @ 52.70, mod-strong siliceous narrow qtz veinlets 7-10° CA	16555	46.30	47.00	0.70	<0.03				<0.03	0.8				0.8					
		52.90	53.50	- fractures with Fe stain - 40° CA, broken core	16556	51.50	52.50	1.00	<0.03	<0.03			<0.03	0.3	0.1			0.2					
54.50	59.50			RQFP																			
				- sheared and fault zone																			
				- reddish brown to brown grey matrix, moderate siliceous sections, highly broken, limonite coated and filled fractures and vugs, fractures parallel to core to 5-7° CA, plus cross cutting @ 40° CA, limonite gouge 55.50 - 56.00																			
		57.10	57.50	-brecciated qtz vein, intense Fe carbonate, limonite	16557	56.00	56.70	0.70	0.03				0.03	0.1				0.1					
59.50	60.70			RQFP																			
				- grey siliceous matrix, 5-7% irregular qtz and qtz calcite veinlets and fracture fillings																			
60.70				EOH																			
				Robert Weicker																			



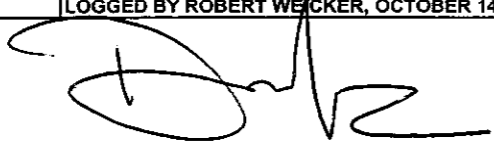
DIAMOND DRILL LOG						HOLE: TS-02-86																											
NORTHING:		L47+00N		AZIMUTH: 270 °		STARTED:		Oct. 12, 2002		LENGTH:		106.4m																					
EASTING:		52+67E		DIP: -45 °		COMPLETED:		Oct. 13, 2002		CORE SIZE:		BQTW																					
ELEVATION:				DIP TESTS: - 42° at 106.4 M		LOGGED:		Oct. 14, 2002																									
SECTION:						LOGGED BY: Robert Weicker																											
PURPOSE: Test Larry Vein																																	
LITHOLOGY						SAMPLES																											
MAJOR UNIT		MINOR UNIT		DESCRIPTION		SAMPLE NUMBER		FROM		TO		LENGTH (m)		Au(1) g/t		Au(2) g/t		Au(3) g/t		Au(4) g/t		Au g/t FINAL		Ag(1) g/t		Ag(2) g/t		Ag(3) g/t		Ag(4) g/t		Ag g/t FINAL	
FROM		TO																															
0.00		4.50																															
4.50		18.00																															
																				</													

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DIAMOND DRILL LOG					HOLE: TS-02-86		PAGE 2		OF 3								
LITHOLOGY					SAMPLES												
MAJOR UNIT		MINOR UNIT		DESCRIPTION	SAMPLE NUMBER	FROM	TO	LENGTH (m)	Au(1) g/t	Au(2) g/t	Au(3) g/t	Au(4) g/t	Ag(1) g/t	Ag(2) g/t	Ag(3) g/t	Ag(4) g/t	Ag(5) g/t
FROM	TO	FROM	TO														
41.00	44.10			SILICIFIED RQFP	16502	41.00	42.00	1.00	0.01				0.01	0.5			0.5
				- marbled appearing, moderately to intensely silicified zone, with minor qtz-calcite veining	16503	42.00	43.00	1.00	0.16				0.16	1.4			1.4
		41.00	41.80	- fracture zone, very blocky to shattered appearing, with limonite on fractures and a few 5-10 mm qtz veinlets	16504	43.00	43.50	0.50	0.03				0.03	0.7			0.7
		42.00	43.00	- gray silicified RQFP with irregular, wispy qtz-calcite veinlets and infilled fractures, and breccia zones at 42.6, 42.8 - some limonite on fractures at 20° to core axis	16505	43.50	44.00	0.50	0.03				0.03	1.3			1.3
		43.00	43.30	- qtz breccia zones to 30% of interval													
44.10	55.30			FAULT ZONE IN RQFP													
				- very blocky to shattered, with limonite staining on fractures at all orientations, but prominent sets at 5°, 35°, 70° to core axis													
				- from 50.7 to 55.3, numerous zones of clay gouge, including from 51.0-52.5													
55.30	58.90			RQFP													
				- light gray, moderately fractured at 15-20°, and 45° to core axis, with reddish lapilli fragments/bands													
				- a few zones of brecciation, including 56.9-57.1, with associated irregular qtz-calcite veining													
		57.40	58.10	- fault zone, strong limonite staining on fractures, strongly oxidized													
58.90	65.20			SILICIFIED RQFP	16506	58.90	60.00	1.10	0.04				0.04	0.4			0.4
				contains 3-5% qtz-calcite veinlets and infilled fractures, within a moderately silicified gray groundmass, with fspar phenox to 4-10 mm, and lapilli fragments to 15-20 mm - fractures, with chlorite and qtz-calcite filling, are at 25°, 45° to core axis	16507	60.00	61.00	1.00	0.01				0.01	0.5			0.5
			59.60	- large 2 cm lapilli fragment	16508	61.00	62.00	1.00	NIL				NIL	0.5			0.5
		60.00	60.20	- numerous chlorite filled fractures at 20°, 50° to ca, locally strongly oxidized	16509	62.00	63.00	1.00	0.01				0.01	0.4			0.4
					16510	Blank			0.03	NIL			0.01	NIL	NIL		NIL
		63.80	64.00	- brecciated 3-5 cm qtz-calcite vein at 20° to ca with trace Py	16511	63.00	64.00	1.00	0.05				0.05	1.2			1.2
		64.40	64.80	- bleached, intensely silicified zone, with marbled, cloudy texture	16512	64.00	65.00	1.00	0.05				0.05	0.5			0.5
		64.90	65.00	- blocky, and strongly fractured at 35°, 45° to ca													
65.20	73.10			RQFP													
				-reddish brown groundmass with abundant 2-10 mm fsar phenox, moderately fractured and blocky, with prominent fracture sets at 25°, 35-45°													
73.10	80.50			FAULT ZONE IN RQFP													
				- very blocky, broken core, with limonite, chlorite on numerous fractures at 40° - basically rubble													
80.50	86.20			RQFP	16513	81.50	82.50	1.00	0.01				0.01	0.7			0.7
				- as previously described	16514	82.50	83.50	1.00	0.02				0.02	0.5			0.5
		81.20	85.00	- moderately silicified, with hairline calcite fracture filling at 35, 70° to ca	16515	83.50	84.50	1.00	NIL				NIL	NIL			NIL
		83.70	85.00	- locally strongly fractured and blocky, with fractures at 10°- at 85.0, 3-5 mm qtz-calc vein at 25°													
86.20	90.70			SILICIFIED RQFP	16516	86.90	87.50	0.60	0.01				0.01	NIL			NIL
				- creamy buff coloured, with strong silicification, and 5-7% qtz-calcite veins	16517	87.50	89.00	1.50	0.01				0.01	0.1			0.1
		86.90	87.10	- calcite vein at 30°, followed by narrow limonitic fault zone to 87.2	16518	89.00	90.20	1.20	0.01				0.01	0.3			0.3
					16519	90.20	90.70	0.50	0.07	0.07			0.07	0.3	0.3		0.3
					16520	Blank			0.10				0.10	NIL			NIL
90.70	106.40			RQFP													
				- mostly reddish brown fresh RQFP, with 20% gray, bleached, weakly altered sections	16521	90.70	91.50	0.80	NIL				NIL	NIL			NIL
		92.90	93.40	- fault zone, with chlorite, limonite on fractures	16522	91.50	91.80	0.30	0.01				0.01	NIL			NIL
		93.80	93.90	light reddish band, with a few qtz-calc veinlets, at 30°, 70°	16523	95.00	95.50	0.50	NIL				NIL	NIL			NIL
			94.30	- 3-5 mm gray qtz veinlet at 55° with trace Py	16524	97.80	98.40	0.60	NIL				NIL	NIL			NIL
		95.00	95.40	- a few qtz-calc veinlets at 45-55°, with trace Py, gray-black sulphide	16525	98.40	98.80	0.40	NIL				NIL	NIL			NIL
		96.90	97.30	- fault gouge, comprised of crushed RQFP and chlorite/clay, at 55° to ca	16526	98.80	99.10	0.30	0.01				0.01	NIL			NIL
		97.80	98.40	- bleached, silicified zone, with contacts at 70°	16527	99.10	100.20	1.10	0.10				0.10	0.1			0.1
		98.80	99.10	- silicified zone, with chlorite, qtz, calcite fracture filling at 80°, trace Py													
		99.40	99.70	- silicified zone, with chlorite, qtz, calcite fracture filling at 80°, trace Py													

DIAMOND DRILL LOG					HOLE: TS-02-86					PAGE 3					OF 3				
LITHOLOGY										SAMPLES									
MAJOR UNIT		MINOR UNIT		DESCRIPTION	SAMPLE NUMBER	FROM	TO	LENGTH (m)	Au(1) g/t	Au(2) g/t	Au(3) g/t	Au(4) g/t	Au g/t FINAL	Ag(1) g/t	Ag(2) g/t	Ag(3) g/t	Ag(4) g/t	Ag g/t FINAL	
FROM	TO	FROM	TO																
90.70	106.40			CONTINUED															
		99.70	100.70	- fault zone, with chlorite, limonite on fractures at 35-55° to core axis															
		101.50	102.00	- fractured zone															
				END OF HOLE AT 106.4 M															
				LOGGED BY ROBERT WECKER, OCTOBER 14, 2002															



DIAMOND DRILL LOG

HOLE: TS-02-87

NORTHING: 53+04N

AZIMUTH: 300 °

STARTED: Oct. 25, 2002

LENGTH: 203.45m

EASTING: 51+30E

DIP: -50 °

COMPLETED: Oct. 28, 2002

CORE SIZE: BQTW

ELEVATION:

DIP TESTS: 45° at 96.45 M, and 42° at 203.45 M

LOGGED BY: A.D. McLaughlin

SECTION:

PURPOSE: TOMMY VEIN NORTH EXTENSION

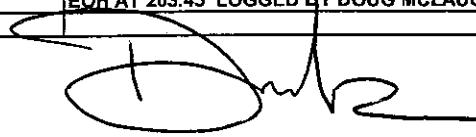
LITHOLOGY					SAMPLES													
MAJOR UNIT		MINOR UNIT		DESCRIPTION	SAMPLE NUMBER	FROM	TO	LENGTH (m)	Au (1) g/t	Au (2) g/t	Au (3) g/t	Au (4) g/t	Au g/t FINAL	Ag (1) g/t	Ag (2) g/t	Ag (3) g/t	Ag (4) g/t	Ag g/t FINAL
FROM	TO	FROM	TO															
0.00	13.72			CASING (NOTE: CASING NOT RECOVERED-SNAPPED OFF DOWN HOLE)														
13.72	108.12			MICRODIORITE SILL														
				- medium gray, massive, fine grained, equigranular microdiorite														
				- contains afew minor calcite stringers, and minor chlorite filled fractures														
				- occasional weak sausserite/chlorite alteration														
				- chill margin at lower contact over 20 cm, with banding at 30° to core axis - lower contact very sharp, at 30°														
108.12	159.43			RQFP (RHYOLITE QUARTZ FELDSPAR PORPHYRY)														
				- reddish brown, massive to weakly banded, medium grained, with up to 7% quartz phenocrysts to 3 mm, 20-30% fspar phenocrysts, ofetn broken to euhedral, and 5% sub-angular lithic fragments < 1 cm, in red-brown aphanitic, siliceous groundmass														
				- moderately fractured, at 30-40°, 70° to core axis, mainly with clay, sericite fracture filling														
				- fspars are moderately clay-chlorite altered, minor sausserite														
				- contains 1% quartz and quartz-carbonate microveins, at 0-10°, 20-30° to core axis - veining intensity increases to 3% below 114.58 metres														
		109.30	111.80	- mottled gray bleaching, with increased chlorite/clay after fspars														
		114.58	115.50	- strongly fractured zone, at 20-30°, with minor clay-chlorite, Fe oxides on fractures, and 20% 1 cm qtz veins at 0-10° with minor specular hematite, pyrite														
			116.70	- 2 cm banded qtz vein at 20°, with light brown fspar microvein at centre, and minor disseminated pyrite														
			116.98	- 2cm banded qtz vein at 30°, minor chlorite, pyrite at margins														
		117.00	159.43	- below 117.0, lithic fragments increase to 10% and 3 cm in places, often elongate at 70-75°														
		126.00	159.43	- fspars become orange-brown in colour														
		127.90	128.30	- fracture zone, at 20°, 45° to core axis, with minor chlorite, clay, Fe oxides on fracture surfaces														
			132.90	- 3 cm qtz vein at 30°, with adjacent stockwork veining in wallrock for 5 cm, with clay-silica alteration halos														
		130.20	135.20	- fspars are bleached, weakly clay altered														
			133.84	- 5 mm fspar-qtz vein at 55°														
			135.43	- < 5 mm qtz-fspar vein at 20°														
			135.50	- < 5 mm qtz-fspar vein at 20°														
			135.98	- 1 cm fspar vein/breccia at 30°														
		138.50	138.75	- fractured zone, with chlorite, clay on fractures at 0°, 45°														
		146.04	147.40	- partially clay altered fspars and lithic fragments														
		150.50	150.65	- broken core-rubble zone- possible fault zone														
		145.00	159.43	- increased light green sausserite/sericite alteration of fspars, with corresponding decrease in orange-brown colouration - patchy silicification, and up to 5% qtz, qtz-carb veins at 20-30° to core axis														
159.43	169.19			BLEACHED RQFP	16845	161.70	163.20	1.50	0.03				0.03	0.2				0.2
				- becomes pale green to gray, with afew mottled, reddish-brown less altered sections - similar to overlying unit except for increased alteration and increase in quartz vein and vein breccia zones	16846	163.20	164.70	1.50	<0.03				<0.03	0.1				0.1

GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

27.091

DIAMOND DRILL LOG					HOLE: TS-02-87	PAGE 2	OF 3												
LITHOLOGY						SAMPLES													
MAJOR UNIT	FROM	TO	MINOR UNIT	DESCRIPTION	SAMPLE NUMBER	FROM	TO	LENGTH (m)	Au (1) g/t	Au (2) g/t	Au (3) g/t	Au (4) g/t	Au g/t FINAL	Ag (1) g/t	Ag (2) g/t	Ag (3) g/t	Ag (4) g/t	Ag g/t FINAL	
159.43	169.19			CONTINUED															
				- overall qtz plus or minus carbonate plus or minus fspar veins to 10%, but occasionally to 50% over isolated 30 cm sections - veins usually at 30-40°, 60-70° - very minor associated specular hematite as stringers and disseminated mineralization within veins	16847	164.70	166.20	1.50	<0.03				<0.03	0.1				0.1	
			162.20	164.35	- locally veins contain 0.5% specular hematite with intermixed gray-black "sooty" sulphide	16848	166.20	167.70	1.50	<0.03			<0.03	0.2				0.2	
			162.75	163.15	- 30% white qtz, qtz-calcite veins and vein breccia zones at 30-40°, with strong silicification of wallrock fragments	16849	167.70	169.19	1.49	0.03	<0.03		<0.03	0.2	0.3			0.3	
			163.40	166.20	- locally less bleached, altered														
			166.20	169.19	- veins and vein breccia zones increase to 20%, with strong local silicification of wallrock fragments														
169.19	169.68			BLEACHED RQFP BRECCIA	16850	169.19	169.68	0.49	0.03				0.03	0.2				0.2	
				- as above, but intensely brecciated, with 50% angular to sub-rounded variably silicified RQFP fragments to 3 cm in a light green silicified sericitic groundmass, with < 5% qtz-calcite veins and brecciated veins - upper contact is gradational, and lower contact is sharp, at 67° to core axis	16851	BLANK			<0.03				<0.03	0.1				0.1	
169.68	170.56			QUARTZ VEIN BRECCIA (POSSIBLE TOMMY VEIN INTERCEPT)	16852	169.68	170.13	0.50	0.06				0.06	0.1				0.1	
				- intense breccia zone, comprised of 70% angular fragments of quartz vein and intensely silicified RQFP to 3 cm in a strongly siliceous (vein?) matrix - fragments are approximately 50% vein material and 50% altered RQFP - contains minor gray-black sulphide associated with thin qtz-calcite stringers/filled fractures, and minor hematite staining	16853	170.13	170.56	0.43	0.09				0.09	0.6				0.6	
				- strongly fractured, with fracture intensity increasing towards 170.56 - fractures mainly at 40-50° - lower contact is sharp with underlying fault gouge															
170.56	170.66			FAULT GOUGE															
				- light green clay rich gouge, with small 1-2 mm fragments of brecciated quartz vein and RQFP	16854	170.56	171.56	1.00	<0.03				<0.03	0.8				0.8	
170.66	173.39			BLEACHED RQFP	16855	171.56	173.39	1.83	<0.03				<0.03	0.2				0.2	
				- pale green to very light brown, and similar to above bleached units bu locally with less intense silicification of groundmass															
				- alteration (clay, lesser silica) still obscures primary textures															
				- strongly fractured, with 25% of unit rubbly core fragments, in intervals up to 20 cm - most fractures are at 40-50°, 20-30°, with clay, sericite, and fault gouge infilling fractures															
				- contains 10% qtz veins and stringers < 0.5 cm, usually at 0-10° and 20-30°, cut by later qtz-calcite stringers at 60-70°, with minor associated gray-black sulphide															
			171.20	- 2 cm qtz calcite vein at 22°															
173.39	203.45			RQFP	16856	173.39	174.30	0.91	<0.03				<0.03	0.1				0.1	
				- identical to rhyolite above alteration zones (108.12-159.43)	16857	174.30	175.90	1.60	<0.03				<0.03	0.4				0.4	
				- locally moderate clay-sauserite alteration of feldspars, and as fracture filling within RQFP, which is moderately fractured	16858	175.90	177.00	1.10	<0.03				<0.03	0.3				0.3	
				- contains 5% white qtz-calcite and occasional feldspar veins and veinlets from 0.5 mm to 0.5 cm, usually at 20-30° and 60-70° to core axis	16859	177.00	177.80	0.80	<0.03				<0.03	0.5				0.5	
				- a few more intensely fractured and rubbly zones, from 173.80-174.30, 174.60-175.90, 177.80-179.40 (including a zone of fault gouge from 178.40-178.80)	16860	177.80	179.40	1.60	<0.03				<0.03	0.7				0.7	
			180.00	182.10	- cataclastite zone, intensely fractured and broken core, with seams of qtz-calcite, and fault gouge, at 70-80° to core axis														
			182.53	183.50	- fracture zone														
			183.90	188.30	- fault gouge zone, with moderate Fe oxide staining on fractures														
			190.45	190.80	- strongly fractured zone														
			193.25		- small gray banded quartz vein with trace gray-black sulphide, at 40°														

DIAMOND DRILL LOG					HOLE: TS-02-87					PAGE 3		OF 3											
LITHOLOGY										SAMPLES													
MAJOR UNIT		MINOR UNIT		DESCRIPTION					SAMPLE NUMBER	FROM	TO	LENGTH (m)	Au (1) g/t	Au (2) g/t	Au (3) g/t	Au (4) g/t	Au g/t FINAL	Ag (1) g/t	Ag (2) g/t	Ag (3) g/t	Ag (4) g/t	Ag g/t FINAL	
FROM	TO	FROM	TO																				
173.39	203.45			CONTINUED																			
		195.84	195.90	- brecciated qtz-calcite vein at 40°																			
		200.38	200.66	- minor yellow Fe oxide staining																			
		201.47	203.45	strongly fractured zone, with local fault gouge zones at 20-30°, 40-50°																			
				EQH AT 203.45 LOGGED BY DOUG MCLAUGHLIN																			



DIAMOND DRILL LOG				HOLE: TS-02-88															
NORTHING:		L55+00N		AZIMUTH:		240 °		STARTED:		Oct. 28, 2002		LENGTH:		182.6m					
EASTING:		51+30E		DIP:		- 50 °		COMPLETED:		Oct. 29, 2002		CORE SIZE:		BQTW					
ELEVATION:				DIP TESTS:		-49° at 91.46 M, and -42° at 182.6 M		LOGGED:		Oct., 2002									
SECTION:								LOGGED BY:		Duncan McIvor									
PURPOSE:		Step out from intersection in TS-02-82																	
LITHOLOGY						SAMPLES													
MAJOR UNIT		MINOR UNIT		DESCRIPTION		SAMPLE NUMBER	FROM	TO	LENGTH (m)	Au (1) g/t	Au (2) g/t	Au (3) g/t	Au (4) g/t	Au g/t FINAL	Ag (1) g/t	Ag (2) g/t	Ag (3) g/t	Ag (4) g/t	Ag g/t FINAL
FROM	TO	FROM	TO																
0.00	29.50			CASING															
				- Casing reamed to 29.57m due to bad blocky ground															
				- Bedrock with a few caves, seams of overburden - seems to have been encountered @ 21.00m, as follows:															
		21.00	27.00	MICRODIORITE SILL															
				- may be large boulders, as a few pebble zones and a few 10-20cm RQFP fragments															
		27.00	29.50	RQFP (RHYOLITE QUARTZ FELDSPAR PORPHYRY)															
				- blocky, badly broken - may be large boulders															
				- includes, from 27.00 - 27.40, a few 5-10cm qtz vein fragments within locally bleached altered RQFP															
				- remaining RQFP is unaltered, as documented below															
29.50	80.30			RQFP (RHYOLITE QUARTZ FELDSPAR PORPHYRY)															
				- dark grey to reddish grey, hard, siliceous rhyolite groundmass with 20% 1-5mm fspars phenox, 5% 3-5mm qtz phenox - massive (ie no pervasive fabric)															
				- also contains a few 5mm-2cm lapilli to agglomeratic frags of variable composition															
				- remains blocky, strongly fractured with limonite contact fractures															
				- contains a few (<2%) thin 1-2cm qtz-carb veins @ variable orientations - major veins are noted below															
				- no significant alteration or sulphide mineralization															
				- from 37.00 - 37.20, 2cm qtz-carb vein @ 5° to core axis															
				- @ 37.50, 3cm qtz-carb vein with tr. Py @ 20° to core axis															
				- @ 38.40, 2 cm qtz-carb vein @ 20° to core axis															
				- @ 40.70, 20cm brecciated qtz-carb vein @ 25° to core axis, locally with minor fault gouge															
				- from 40.00m onwards, becomes weakly fol @ 50-60° to core axis															
				- from 56.50 - 56.70, 2cm qtz-carb vein @ 15° to core axis															
				- @ 63.25, 5cm qtz-carb vein @ 40° to core axis															
				- from 50.00m, fspars become brick red - may be pervasive potassic alteration															
				- from 68.00m, coarsens - becomes very fragmental, with 20% 1-5cm agglomerate frags of light green to red volc.															
				- @ 73.00, 5cm grey cherty qtz vein @ 40° to core axis with trace Py															
				- @ 73.30, 2cm banded, blue green to grey chalc qtz vein @ 45° to core axis															
				- @ 74.50, 2cm qtz-carb vein @ 45° to core axis with trace Py															
				- from 76.00 - 76.10, 10cm intensely brecciated zone (see following unit)															
				- @ 77.70, 2cm grey chalc qtz vein @ 45° with trace diss Py															
				- contact @ 80.30 based on appearance of strong brecciation in RQFP															
80.30	86.90			INTENSELY BRECCIATED RQFP		16861	80.30	81.30	1.00	<0.03									
				- RQFP becomes intensely brecciated, with breccia zones to 90% of this interval		16862	81.30	82.30	1.00	<0.03					<0.03	0.4			0.1
				- breccia consists of <<1mm-1cm angular frags of RQFP, in a groundmass/matrix of extremely hard grey silica (+minor calc, Fe carb) and a darker matrix of mylonite (ie ground-up RQFP)		16863	82.30	83.30	1.00	<0.03					<0.03	0.1			0.4
				- contains a few 1-2cm qtz-calc veins, occasionally vuggy, and associated with breccia zones		16864	83.30	84.30	1.00	<0.03					<0.03	0.3			0.1
				- host frags of RQFP often appear weakly silicified		16865	84.30	85.30	1.00	0.08					0.08	0.3			0.3
				- contains an average of 1% vfg diss. sulfides, equally Py and black unknown sulphide with tr gn, cpy		16866	85.30	86.90	1.60	<0.03	<0.03	<0.03		<0.03	0.1	0	0		0.1
				- contact @ 86.90 based on increase in intensity and frequency of brecciation within RQFP															

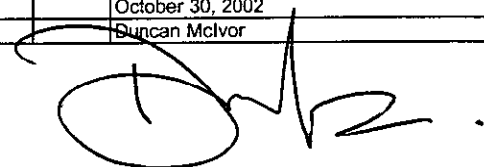
GEOLOGICAL SURVEY BRANCH

ASSESSMENT REPORT

27.091

DIAMOND DRILL LOG					HOLE: TS-02-88					PAGE 2		OF 3								
LITHOLOGY					SAMPLES															
MAJOR UNIT		MINOR UNIT		DESCRIPTION	SAMPLE NUMBER	FROM	TO	LENGTH (m)	Au (1) g/t	Au (2) g/t	Au (3) g/t	Au (4) g/t	Au g/t FINAL	Ag (1) g/t	Ag (2) g/t	Ag (3) g/t	Ag (4) g/t	Ag g/t FINAL		
FROM	TO	FROM	TO																	
86.90	94.20			RQFP (RHYOLITE QUARTZ FELDSPAR PORPHYRY) - similar in appearance to interval from 29.50 - 80.30m - contains a few 1-10cm brecciated zones, as in 80.30 - 86.90, and contains 5% <1cm calc minor silica veins which also locally weakly brecciate rock - sulphide content falls to only trace Py, black sulph. gn. usually associated with the few thin breccia zones within the interval																
94.20	98.50			STRONGLY BRECCIATED RQFP - as in 80.30 - 86.90, but with brecciated zones affecting 60% of interval - locally a few 1-2cm clay rich gouge zones, indicating long lived structures/movement history - contains only trace diss. Py. gn. black unknown sulphide within silica-Fe carbonate matrix to breccia	16867	94.20	95.50	1.30	<0.03				<0.03	0.1					0.1	
					16868	95.50	97.00	1.50	<0.03				<0.03	0.1					0.1	
					16869	97.00	98.50	1.50	<0.03				<0.03	0.1					0.1	
					16870	blank			<0.03				<0.03	0.1					0.1	
98.50	140.50			RQFP - similar to units from 29.50 - 30.30 and 86.90 - 94.20 - mod. foliates @ 55-65° to core axis - locally fragmental with 15% 5mm-2cm agglom frags, often stretched elongate fol. of variable composition - only weakly frac. @ all orientations, with calc, some silica frac filling - a few (<5%) 1-10cm wkly brecciated zones, predominantly by calcite stringers - only tr. diss. Py black sulph - @ 109.50, 5cm mod. silicified zone as halo on thin qtz calc stringers - very homogeneous unit - no significant veining, alteration or mineralization - from 122.50 - 133.00, locally wkly to moderately "autobrecciated" appearing - from 134.70 - 135.00, locally 30% qtz-calc-hard white carb veins to 1cm weakly to mod. brecciate host rock - from 139.00 - 140.50, becomes weakly to mod. "autobrecciated", ie small annular brecciated RQFP fragments within a groundmass/matrix of RQFP - sharp contact @ 140.5 with fault gouge zone, @ 40° to core axis																
					16871	139.00	140.50	1.50	<0.03				<0.03	0.1					0.1	
140.50	141.50			GREEN CLAY (FAULT GOUGE) - pred. soft, green (montmorillinite?) clay as fault gouge, with a few remnant recognizable but but intensely altered RQFP fragments, and a few 1-2cm qtz vein fragments - very strong fault zone	16872	140.50	141.50	1.00	<0.03				<0.03	0.6					0.6	
141.50	145.00			STRONGLY BLEACHED, VARIABLY MICROBRECCIATED RQFP - light grey to greyish green RQFP - groundmass has been strongly and pervasively bleached (combination of clay-carb alt) - approx. 30% of interval is strongly "microbrecciated" with very small (<<5mm) brecciated frags of RQFP within a grey silica-carb matrix OR a matrix of ground-up, mylonitic RQFP (autobreccia) - wkly fol @ 50° to core axis - only trace vfg diss. Py, black sulph. - <5% 5mm-1cm qtz-carb veins, often with weak silica alt. halos	16873	141.50	143.00	1.50	<0.03				<0.03	0.3					0.3	
					16874	143.00	144.00	1.00	<0.03				<0.03	0.2					0.2	
					16875	144.00	145.00	1.00	0.07	0.06			0.07	0.4	0.4				0.4	
145.00	154.23			MICRODIORITE DYKE/SILL? - typical grey, vfg homogeneous microdiorite but with blocky, fault bounded contacts (both upper and lower)																
154.23	161.50			BRECCIATED QUARTZ-CARBONATE VEIN (TOMMY VEIN NORTH EXTENSION) - complex multiphase vein system, as follows: - from 154.23 - 157.70, comprised of 50% 1-10cm qtz-carb veins and brecciated vein fragments, @ no preferred orientation - veins are white silica, grey cherty to chalcedonic silica, and very hard white carb. (with minor fspar? adularia?), and 50% <1cm-10cm brecciated fragments of intensely bleached, often soft, clay altered, to hard, silicified RQFP fragments - also contains, between 154.25 - 154.95, a 20cm fragment (or thin dykelet) of bleached tan coloured microdiorite - interval from 154.23 - 157.70 contains only trace sulphides, as PY, black unknown sulph. and minor gn, Cpy (pinprick), usually assoc. with late fractures - also contains minor amounts of hematite as late fracture filling - from 157.70 - 161.50, more a true qtz-carb vein - pred. grey, often cherty appearing qtz to white qtz, brecciated by secondary hard white silica-carb (+/- fspar? adularia?) veins and infilled fractures - also a mottled appearance due to a clay alt. along fractures - this interval is also relatively sulphide poor with only 0.25% Py, 0.5% black sulphide, both usually associated with late infilled (sil-carb) fractures	16876	154.23	155.50	1.27	<0.03				<0.03	0.3						0.3
					16877	155.50	156.60	1.10	<0.03				<0.03	0.4					0.4	
					16878	156.60	157.70	1.10	<0.03				<0.03	0.2					0.2	
					16879	157.70	158.50	0.80	0.03				0.03	1.4					1.4	
					16880	158.50	159.50	1.00	<0.03				<0.03	0.6					0.6	
					16881	159.50	160.50	1.00	0.05				0.05	0.3					0.3	
					16882	160.50	161.50	1.00	<0.03				<0.03	0.4					0.4	
					16883	blank			<0.03				<0.03	0.1					0.1	

DIAMOND DRILL LOG				HOLE: TS-02-88				PAGE 3 OF 3											
LITHOLOGY								SAMPLES											
MAJOR UNIT		MINOR UNIT		DESCRIPTION	SAMPLE NUMBER	FROM	TO	LENGTH (m)	Au (1) g/t	Au (2) g/t	Au (3) g/t	Au (4) g/t	Au g/t FINAL	Ag (1) g/t	Ag (2) g/t	Ag (3) g/t	Ag (4) g/t	Ag g/t FINAL	
FROM	TO	FROM	TO																
161.50	164.50			SILICIFIED, QUARTZ (CARBONATE) VEINED RQFP															
				- gray to light reddish gray RQFP, as typical, but with 25% 5mm-2 cm white to gray, cherty appearing qtz veins at 45-60 degrees to core axis, often with very strong 1-2 cm silicification halos - veins contain only trace hard white Fe carbonate, and only trace Py, black sulphide associated with fractures in veins	16884	161.50	162.50	1.00	<0.03	<0.03			<0.03	0.2				0.2	
					16885	162.50	163.50	1.00	0.10				0.10	1.1				1.1	
164.50	165.50			MICRODIORITE DYKE	16886	163.50	164.50	1.00	0.10				0.10	0.3				0.3	
				- light green to tan (locally bleached) microdiorite dyke - upper contact at 65 degrees, lower at 45 degrees															
165.50	168.80			SILICIFIED QUARTZ (CARBONATE) VEINED RQFP	16887	165.50	166.50	1.00	0.03				0.03	0.4				0.4	
				- unit is light grey to reddish grey RQFP, as is typical, but with 25% <5mm to 5cm white to cherty grey qtz (and minor associated hard Fe carb) veins @ all orientations (preferred sets @ 50-70° to core axis) - veins have weak to strong sil alt halos, ranging up to 10cm and pervasively silicifying host RQFP	16888	166.50	167.50	1.00	<0.03				<0.03	0.4				0.4	
				- unit contains only tr. Py, vfg black sulph. usually associated with fractures in qtz veins, and as occasional vfg diss. mineralization	16889	167.50	168.80	1.30	0.04				0.04	0.3				0.3	
168.80	180.40			STRONGLY BRECCIATED RQFP	16890	168.80	170.00	1.20	<0.03				<0.03	0.4				0.4	
				- locally RQFP ranges from light grey, bleached, to light reddish grey	16891	170.00	171.50	1.50	<0.03				<0.03	0.4				0.4	
				- unit is very strongly fractured, @ all orientations, with calc silica fracture filling - in places, fracture intensity such that unit is strongly brecciated by both sil-calc seams and "autobrecciated" appearing, with small (<<1cm) RQFP fragments in a similar matrix of ground-up RQFP	16892	171.50	173.00	1.50	<0.03				<0.03	0.7				0.7	
				- unit is pervasively clay altered, ranging from strong (bleached zones) to wk, and has spotty silicification usually as halos on secondary qtz veins	16893	173.00	174.50	1.50	<0.03				<0.03	0.2				0.2	
				- contains a few late 1-2cm cherty grey qtz veins	16894	174.50	176.00	1.50	<0.03				<0.03	0.3				0.3	
				- contains only tr. Py, black sulphide, usually associated with secondary silica veins and minor vfg diss. min	16895	176.00	177.50	1.50	<0.03				<0.03	0.2				0.2	
					16896	177.50	179.00	1.50	<0.03				<0.03	0.3				0.3	
					16897	179.00	180.40	1.40	<0.03				<0.03	0.2				0.2	
					16898	blank			0.05				0.05	0.1				0.1	
180.40	182.58	EOH		PINK TO REDDISH GREY RQFP															
				-relatively unaltered, typical rhyolite quartz feldspar porphyry, with no significant veining, alteration or mineralization															
				October 30, 2002															
				Duncan McIvor															

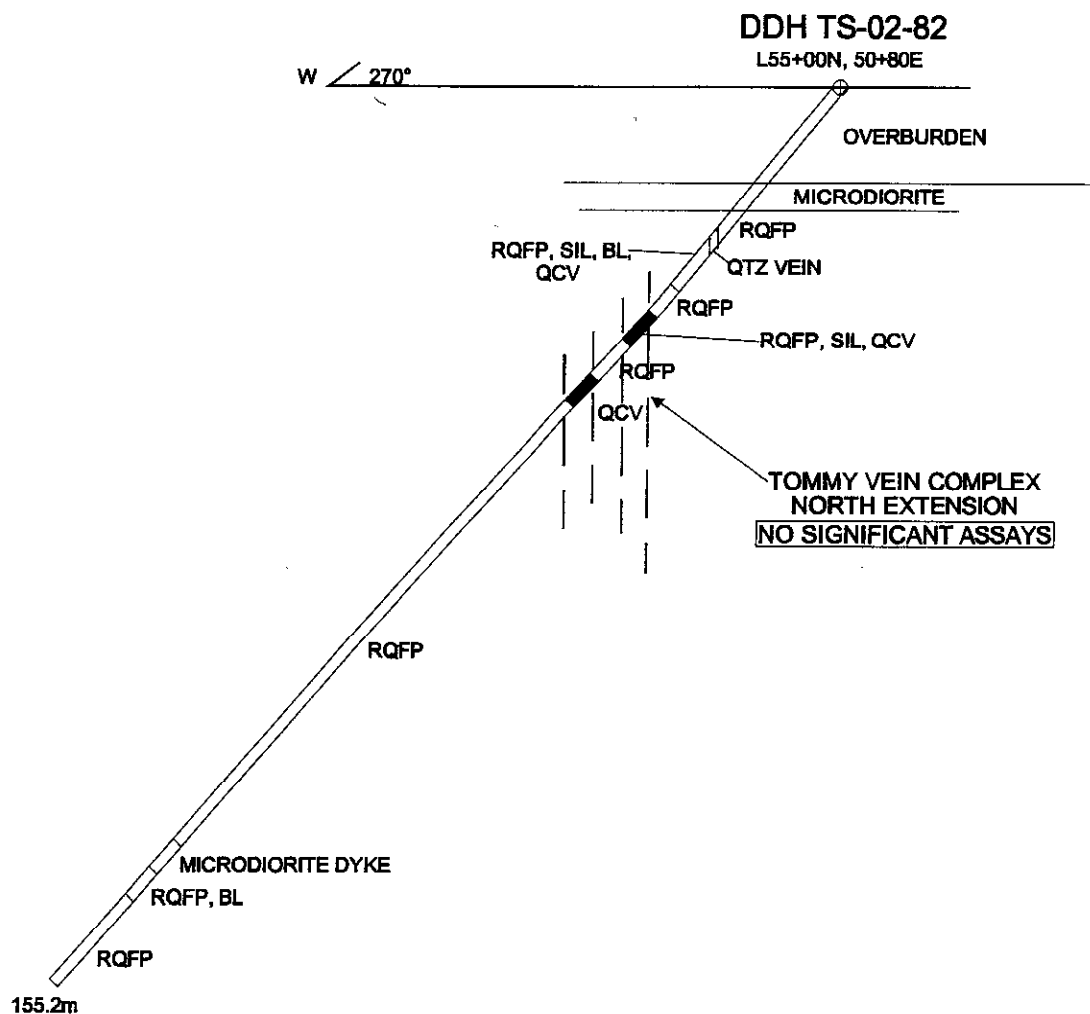


APPENDIX 1

DIAMOND DRILL SECTIONS

GEOLOGICAL SURVEY BRANCH ASSESSMENT REPORT

27,091



SCALE 1:1000



LEGEND

RQFP	RHYOLITE QUARTZ FELDSPAR PORPHYRY
SIL	SILICIFICATION
BL	BLEACHING
QCV	QUARTZ-CARBONITE VEIN
	TOMMY VEIN

SOUTHERN RIO RESOURCES LTD.

**3 T'S PROJECT
TSACHA PROPERTY
SECTION 55+00N
DDH TS-02-82**

SCALE: 1:1000	NTS: 93F/3E.2W	DWG. NAME:
DRAWN BY: D. MCNOR	DATE: Nov. 2002	

GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

27,091

DDH TS-02-83

L53+00N, 51+30E

W / 270°

OVERBURDEN

MICRODIORITE SILL

RQFP


RQFP, SIL, QCV, Bx

TOMMY VEIN (from 143.22-147.77)
0.68 GPT Au/4.55m

RQFP

194.7m

LEGEND

RQFP	RHYOLITE QUARTZ FELDSPAR PORPHYRY
SIL	SILICIFICATION
BL	BLEACHING
QCV	QUARTZ-CARBONITE VEIN
Bx	BRECCIA
	TOMMY VEIN

SCALE 1:1000

0 10 20 30 40 50

METRES

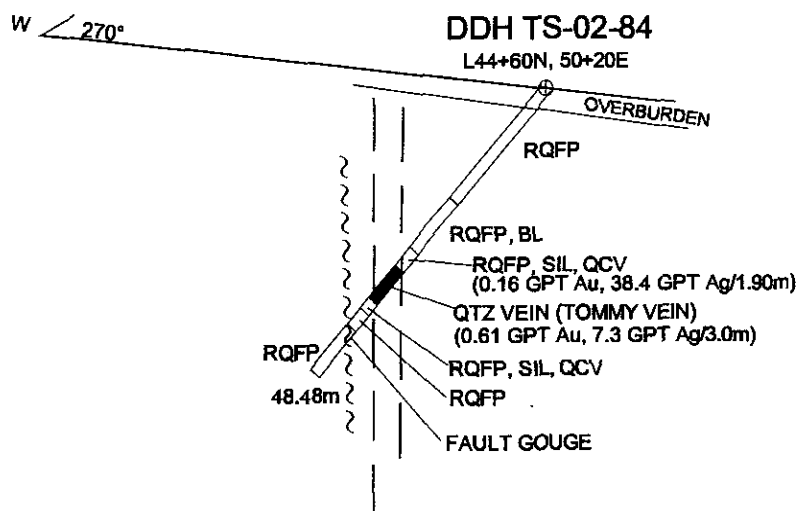
SOUTHERN RIO RESOURCES LTD.

**3 T'S PROJECT
TSACHA PROPERTY
SECTION 53+00N
DDH TS-02-83**

SCALE: 1:1000	NTS: 93F/3E.2W	DWG. NAME:
DRAWN BY: D. MCIVOR	DATE: Nov. 2002	

GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

27,091



SCALE 1:1000



LEGEND

RQFP	RHYOLITE QUARTZ FELDSPAR PORPHYRY
SIL	SILICIFICATION
BL	BLEACHING
QCV	QUARTZ-CARBONITE VEIN
	TOMMY VEIN

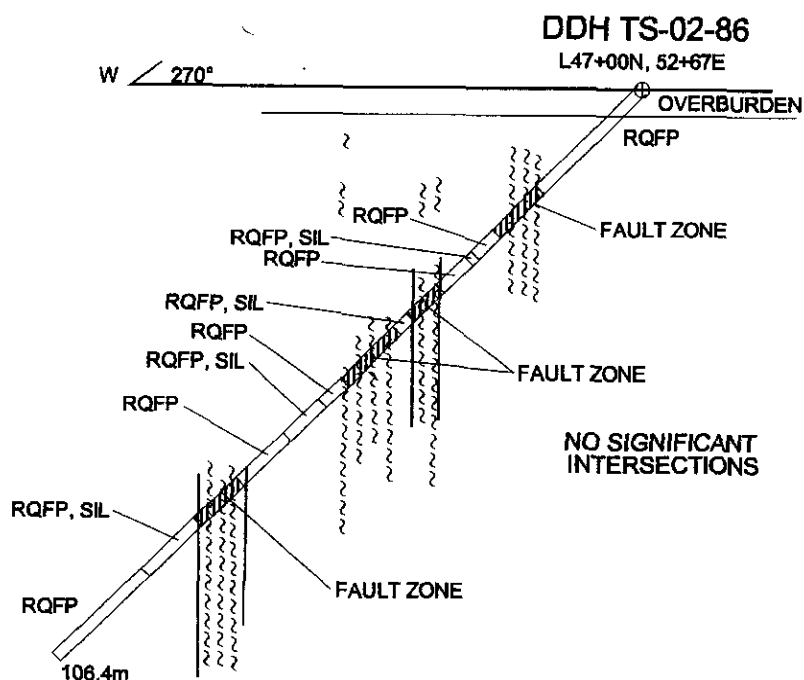
SOUTHERN RIO RESOURCES LTD.

3 T'S PROJECT
TSACHA PROPERTY
SECTION 49+60N
DDH TS-02-84

SCALE: 1:1000	HTS: 93F/3E/2W	ENG. NAME:
DRAWN BY: D. MCIVOR	DATE: Nov. 2002	

GEOLOGICAL SURVEY BRANCH ASSESSMENT REPORT

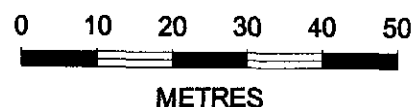
27,091



LEGEND

RQFP	RHYOLITE QUARTZ FELDSPAR PORPHYRY
SIL	SILICIFICATION
BL	BLEACHING
QCV	QUARTZ-CARBONITE VEIN
	FAULT GOUGE

SCALE 1:1000



SOUTHERN RIO RESOURCES LTD.

**3 T'S PROJECT
TSACHA PROPERTY
SECTION 47+00N
DDH TS-02-86
(LARRY VEIN TARGET)**

SCALE: 1:1000	NTS: 93F/3E.2W	DWG. NAME:
DRAWN BY: D. MCMOR	DATE: Nov. 2002	

GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

27,091

DDH TS-02-87

L53+64N, 51+30E

W 300°

OVERBURDEN

MICRODIORITE SILL

RQFP

RQFP, BL

RQFP, BL

TOMMY VEIN (FAULT BOUNDED)
(NO SIGNIFICANT ASSAYS)

RQFP


203.45m

SCALE 1:1000

0 10 20 30 40 50

METRES

LEGEND

RQFP	RHYOLITE QUARTZ FELDSPAR PORPHYRY
SIL	SILICIFICATION
BL	BLEACHING
QCV	QUARTZ-CARBONITE VEIN
	TOMMY VEIN

SOUTHERN RIO RESOURCES LTD.

**3 T'S PROJECT
TSACHA PROPERTY**

DDH TS-02-87

SCALE: 1:1000

NTS: 93F/3E.2W

DWG. NAME:

DRAWN BY: D. MCIVOR

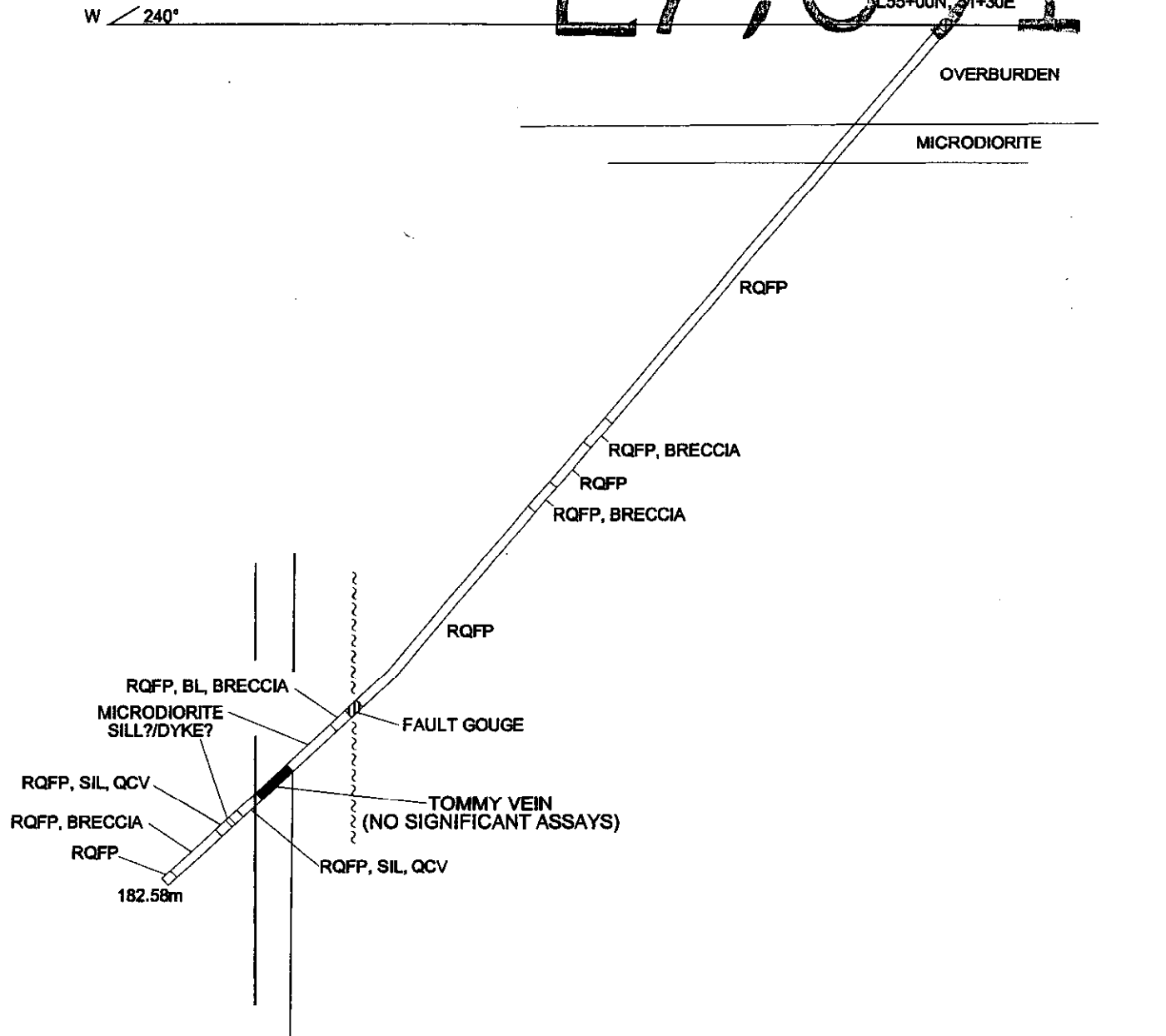
DATE: Nov. 2002

GEOLOGICAL SURVEY BRANCH ASSESSMENT REPORT

27,091

DDH TS-02-88

L55+00N, 51+30E



SCALE 1:1000

0 10 20 30 40 50

METRES

LEGEND

RQFP	RHYOLITE QUARTZ FELDSPAR PORPHYRY
SIL	SILICIFICATION
BL	BLEACHING
QCV	QUARTZ-CARBONITE VEIN
	TOMMY VEIN
	FAULT GOUGE

SOUTHERN RIO RESOURCES LTD.

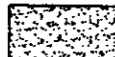
**3 T'S PROJECT
TSACHA PROPERTY**

DDH TS-02-88

SCALE: 1:1000	NTS: 93F/3E.2W	DWG. NAME:
DRAWN BY: D. MCIVOR	DATE: Nov. 2002	

27,091

Legend

 VEINS quartz +/- calcite

Late Cretaceous

 FELSITE fine grained sills, dykes

Jurassic Hazelton Group

 RHYOLITE welded tuff

1a +/- sericite, limonite, hematite, chlorite, clay

1q quartz/calcite stringer/stockwork

1s pervasive silicification

SCALE 1:500

0 10 20 30 40 50

METRES

SOUTHERN RIO RESOURCES LTD.

TSACHA PROJECT

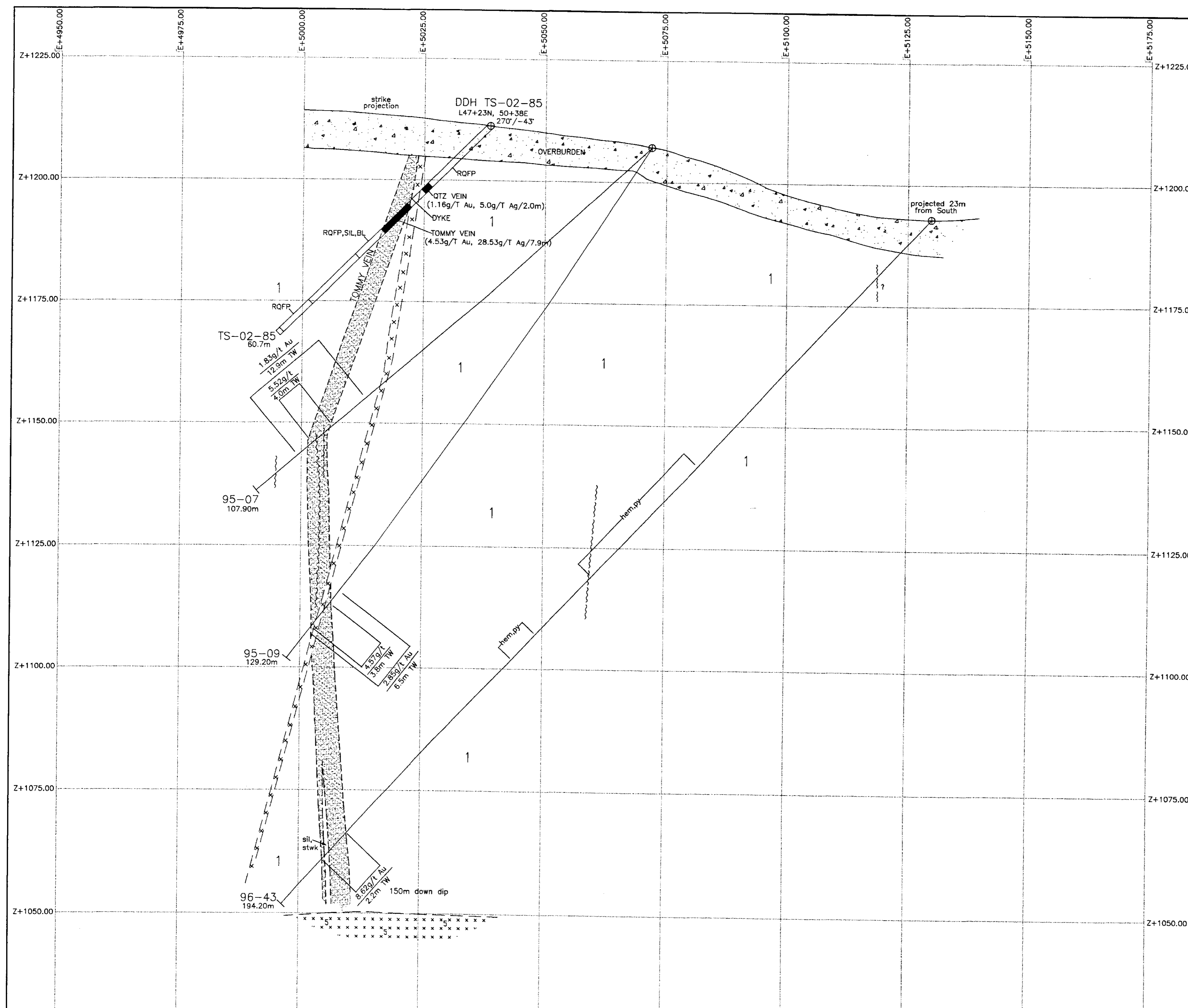
CROSS-SECTION 47+23N

(LOOKING NORTH)

DDH TS-02-85 95-8,9 96-43

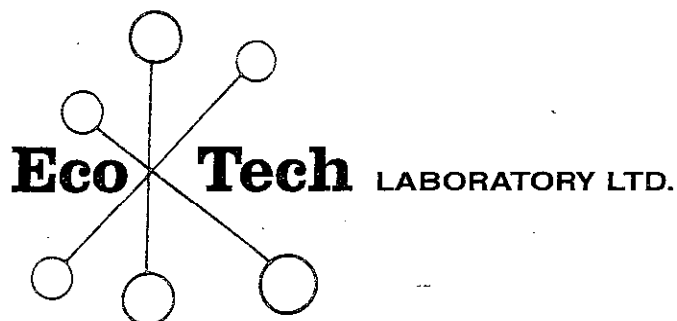
Au g/t 27091

DATE DRAWN: Nov. 2002	SCALE: 1:1000	DWG. NAME:
COMPILED BY: J. Pautler	JOB No: 1745	TSA-4723
DRAWN BY: S.A.	NTS No: 93F/3E	



APPENDIX 2

ORIGINAL ASSAY DATA



ASSAYING
GEOCHEMISTRY
ANALYTICAL CHEMISTRY
ENVIRONMENTAL TESTING

10041 Dallas Drive, Kamloops, B.C. V2C 6T4
Phone (250) 573-5700 Fax (250) 573-4557
email: ecotech@direct.ca

CERTIFICATE OF ANALYSIS AK 2002-411

SOUTHERN RIO RESOURCES LTD.
P.O. Box 11584
Vancouver, BC
V6B 4N8

22-Oct-02

ATTENTION: L. Bottomer & B. Weiker

No. of samples received: 43

Sample Type: Core

Project #: BT5

Shipment #: 1

Samples submitted by: Duncan McIver

ET #.	Tag #	Au (ppb)	Ag (ppm)
1	16501	20	1.1
2	16502	10	0.5
3	16503	155	1.4
4	16504	25	0.7
5	16505	30	1.3
6	16506	35	0.4
7	16507	5	0.5
8	16508	<5	0.5
9	16509	5	0.4
10	16510	25	<0.1
11	16511	45	1.2
12	16512	50	0.5
13	16513	10	0.7
14	16514	20	0.5
15	16515	<5	<0.1
16	16516	5	<0.1
17	16517	5	0.1
18	16518	5	0.3
19	16519	70	0.3
20	16520	10	<0.1
21	16521	<5	<0.1
22	16522	5	<0.1
23	16523	<5	<0.1
24	16524	<5	<0.1
25	16525	<5	<0.1
26	16526	.5	<0.1
27	16527	10	0.1
28	16528	10	0.1
29	16529	15	0.1

TS-02-86
(HARRY
VEIN)

GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORT

27,091
(TOMMY
VEIN)

ET #.	Tag #	Au (ppb)	Ag (ppm)
30	16530	40	0.5
31	16531	>1000	9.0
32	16532	770	0.9
33	16533	<5	<0.1
34	16534	105	0.9
35	16535	60	0.5
36	16536	50	0.8
37	16537	>1000	5.5
38	16538	>1000	>30
39	16539	>1000	>30
40	16540	>1000	>30
41	16541	>1000	>30
42	16542	>1000	16.4
43	16543	>1000	10.5

75-02-SJ

QC DATA:**Resplits:**

1	16501	35	1.0
36	16536	50	1.0

Repeat:

1	16501	30	1.1
10	16510	<5	<0.1
19	16519	65	0.3
36	16536	-	0.8

Standard:

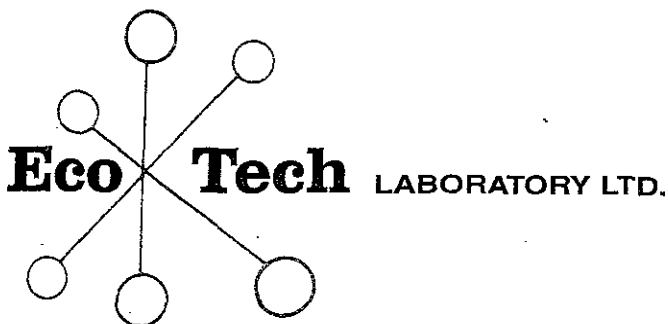
GEO'02	115	1.6
GEO'02	120	1.6

JJ/ejd
XLS/02

ECO TECH LABORATORY LTD.

Jutta Jealous

B.C. Certified Assayer



ASSAYING
GEOCHEMISTRY
ANALYTICAL CHEMISTRY
ENVIRONMENTAL TESTING

10041 Dallas Drive, Kamloops, B.C. V2C 6T4
Phone (250) 573-5700 Fax (250) 573-4557
email: ecotech@direct.ca

CERTIFICATE OF ASSAY AK 2002-411

SOUTHERN RIO RESOURCES LTD.

P.O. Box 11584

Vancouver, BC

V6B 4N8

22-Oct-02

ATTENTION: L. Bottomer & B. Weiker

No. of samples received: 43

Sample Type: Core

Project #: BT5

Shipment #: 1

Samples submitted by: Duncan McIver

ET #.	Tag #	Au (g/t)	Au (oz/t)	Ag (g/t)	Ag (oz/t)
31	16531	1.55	0.045		
37	16537	1.92	0.056		
38	16538	4.21	0.123	30.0	0.88
39	16539	8.86	0.258	30.6	0.89
40	16540	6.69	0.195	42.8	1.25
41	16541	7.28	0.212	58.3	1.70
42	16542	4.87	0.142		
43	16543	1.32	0.038		

QC DATA:

Standard:

Mpl

68.8

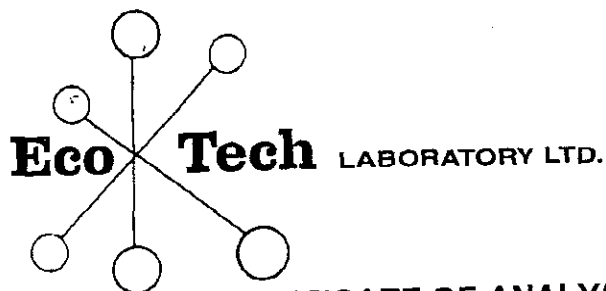
2.01

JJ/kk
XLS/02

ECO TECH LABORATORY LTD.

Jutta Jealous

B.C. Certified Assayer



ASSAYING
GEOCHEMISTRY
ANALYTICAL CHEMISTRY
ENVIRONMENTAL TESTING

10041 Dallas Drive, Kamloops, B.C. V2C 6T4
Phone (250) 573-5700 Fax (250) 573-4557
email: ecotech@direct.ca

CERTIFICATE OF ANALYSIS AK 2002-426

SOUTHERN RIO RESOURCES LTD.
Suite 1410 - 650 West Georgia
Vancouver, BC
V6B 4N8

22-Oct-02

ATTENTION: LINDSAY BOTTOMER

No. of samples received: 7
Sample Type: Core
Project #: 3TS
Shipment #: None Given
Samples submitted by: D. McIvor

ET #.	Tag #	Au (ppb)	Ag (ppm)
1	16627	20	1.2
2	16628	100	1.6
3	16629	220	1.9
4	16630	>1000	15.2
5	16631	700	11.0
6	16632	>1000	9.5
7	16633	5	0.1

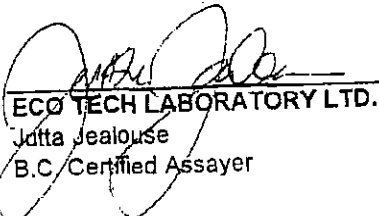
TS-02-83

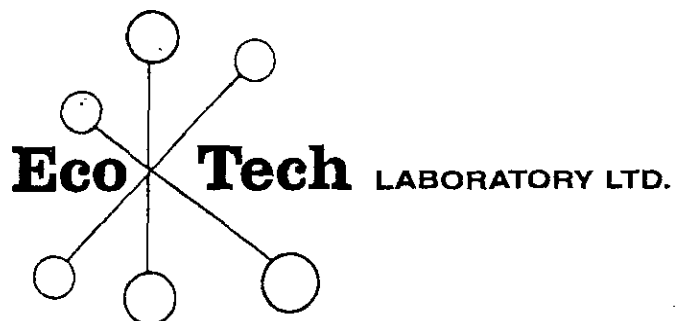
QC DATA:

Resplit:
1 16627 25 1.2

Standard:
GEO'02 125 1.6

JJ/kk
XLS/02


ECO TECH LABORATORY LTD.
Jutta Jealous
B.C. Certified Assayer



ASSAYING
GEOCHEMISTRY
ANALYTICAL CHEMISTRY
ENVIRONMENTAL TESTING

10041 Dallas Drive, Kamloops, B.C. V2C 6T4
Phone (250) 573-5700 Fax (250) 573-4557
email: ecotech@direct.ca

CERTIFICATE OF ASSAY AK 2002-426

SOUTHERN RIO RESOURCES LTD.
Suite 1410 - 650 West Georgia
Vancouver, BC
V6B 4N8

22-Oct-02

ATTENTION: LINDSAY BOTTOMER

No. of samples received: 7

Sample Type: Core

Project #: JTS

Shipment #: None Given

Samples submitted by: D. McIvor

ET #.	Tag #	Au (g/t)	Au (oz/t)
4	16630	1.27	0.037
5	16631	0.73	0.021
6	16632	1.39	0.041

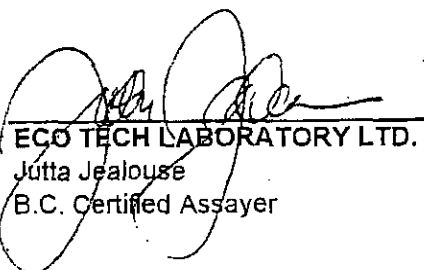
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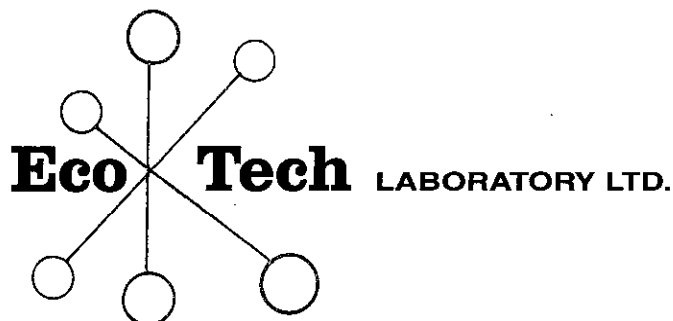
Standard:

PM171

1.40 0.041

JJ/kk
XLS/02


ECO TECH LABORATORY LTD.
Jutta Jealous
B.C. Certified Assayer



ASSAYING
GEOCHEMISTRY
ANALYTICAL CHEMISTRY
ENVIRONMENTAL TESTING

10041 Dallas Drive, Kamloops, B.C. V2C 6T4
Phone (250) 573-5700 Fax (250) 573-4557
email: ecotech@direct.ca

CERTIFICATE OF ASSAY AK 2002-435

SOUTHERN RIO RESOURCES LTD.

Suite 1410 - 650 West Georgia
Vancouver, BC
V6B 4N8

29-Oct-02

ATTENTION: LINDSAY BOTTOMER

No. of samples received: 111

Sample type: Core

Project #: 3TS

Shipment #: 2

Samples Submitted by: Duncan McIvor

ET #.	Tag #	Au (g/t)	Au (oz/t)	Ag (g/t)	Ag (oz/t)
1	16544	1.02	0.030	8.2	0.24
2	16545	0.11	0.003	2.8	0.08
3	16546	<0.03	<0.001	0.1	<0.01
4	16547	0.05	0.001	2.4	0.07
5	16548	0.15	0.004	2.4	0.07
6	16549	0.08	0.002	1.2	0.04
7	16550	<0.03	<0.001	0.8	0.02
8	16551	<0.03	<0.001	0.3	0.01
9	16552	0.06	0.002	0.9	0.03
10	16553	0.28	0.008	0.8	0.02
11	16554	0.04	0.001	1.2	0.04
12	16555	<0.03	<0.001	0.8	0.02
13	16556	<0.03	<0.001	0.3	0.01
14	16557	0.03	0.001	0.1	<0.01
15	16558	<0.03	<0.001	0.1	<0.01
16	16559	<0.03	<0.001	0.1	<0.01
17	16560	<0.03	<0.001	0.1	<0.01
18	16561	0.07	0.002	0.1	<0.01
19	16562	<0.03	<0.001	<0.1	<0.01
20	16563	0.04	0.001	0.4	0.01

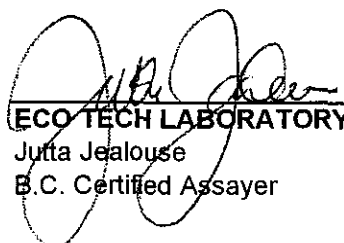

ECO TECH LABORATORY LTD.

dutta Jealouse
B.C. Certified Assayer

JJ/ejd
XLS/02
cc: Bob Weicker

ET #.	Tag #	Au (g/t)	Au (oz/t)	Ag (g/t)	Ag (oz/t)
21	16564	<0.03	<0.001	0.3	0.01
22	16565	0.10	0.003	0.1	<0.01
23	16566	<0.03	<0.001	<0.1	<0.01
24	16567	<0.03	<0.001	0.5	0.02
25	16568	<0.03	<0.001	0.4	0.01
26	16569	<0.03	<0.001	0.4	0.01
27	16570	<0.03	<0.001	0.4	0.01
28	16571	0.05	0.001	4.6	0.13
29	16572	0.23	0.007	77.4	2.26
30	16573	0.11	0.003	11.0	0.32
31	16574	0.13	0.004	18.0	0.53
32	16575	0.08	0.002	1.9	0.06
33	16576	0.07	0.002	0.3	0.01
34	16577	0.11	0.003	1.1	0.03
35	16578	0.10	0.003	3.5	0.10
36	16579	<0.03	<0.001	<0.1	<0.01
37	16580	0.69	0.020	10.4	0.30
38	16581	0.81	0.024	7.5	0.22
39	16582	0.32	0.009	4.0	0.12
40	16583	0.04	0.001	0.8	0.02
41	16584	0.03	0.001	1.1	0.03
42	16585	<0.03	<0.001	<0.1	<0.01
43	16586	<0.03	<0.001	<0.1	<0.01
44	16587	0.05	0.001	1.1	0.03
45	16588	<0.03	<0.001	1.3	0.04
46	16589	<0.03	<0.001	0.1	<0.01
47	16590	<0.03	<0.001	0.1	<0.01
48	16591	<0.03	<0.001	0.2	0.01
49	16592	<0.03	<0.001	0.1	<0.01
50	16593	<0.03	<0.001	0.1	<0.01
51	16594	<0.03	<0.001	0.1	<0.01
52	16595	<0.03	<0.001	0.2	0.01
53	16596	<0.03	<0.001	0.3	0.01
54	16597	0.03	0.001	0.3	0.01
55	16598	<0.03	<0.001	0.2	0.01
56	16599	<0.03	<0.001	0.2	0.01
57	16600	<0.03	<0.001	0.7	0.02
58	16601	<0.03	<0.001	0.3	0.01
59	16602	<0.03	<0.001	0.3	0.01
60	16603	<0.03	<0.001	0.1	<0.01

JJ/ejd
XLS/02
cc: Bob Weicker


ECO TECH LABORATORY LTD.
Jutta Jealous
B.C. Certified Assayer

ET #.	Tag #	Au (g/t)	Au (oz/t)	Ag (g/t)	Ag (oz/t)
61	16604	<0.03	<0.001	0.6	0.02
62	16605	<0.03	<0.001	0.4	0.01
63	16606	<0.03	<0.001	0.3	0.01
64	16607	<0.03	<0.001	0.4	0.01
65	16608	<0.03	<0.001	0.2	0.01
66	16609	<0.03	<0.001	0.5	0.02
67	16610	0.20	0.006	1.9	0.06
68	16611	0.05	0.001	1.1	0.03
69	16612	0.03	0.001	0.6	0.02
70	16613	<0.03	<0.001	0.7	0.02
71	16614	<0.03	<0.001	0.2	0.01
72	16615	<0.03	<0.001	0.2	0.01
73	16616	<0.03	<0.001	0.2	0.01
74	16617	<0.03	<0.001	<0.1	<0.01
75	16618	0.08	0.002	0.3	0.01
76	16619	<0.03	<0.001	0.3	0.01
77	16620	<0.03	<0.001	0.5	0.02
78	16621	<0.03	<0.001	0.4	0.01
79	16622	<0.03	<0.001	0.1	<0.01
80	16623	<0.03	<0.001	<0.1	<0.01
81	16624	<0.03	<0.001	0.1	<0.01
82	16625	<0.03	<0.001	0.1	<0.01
83	16626	<0.03	<0.001	0.5	0.02
84	16634	0.28	0.008	4.4	0.13
85	16635	0.08	0.002	0.7	0.02
86	16636	0.13	0.004	1.1	0.03
87	16637	<0.03	<0.001	0.2	0.01
88	16638	0.06	0.002	0.3	0.01
89	16639	0.05	0.001	0.3	0.01
90	16640	<0.03	<0.001	0.1	<0.01
91	16641	0.11	0.003	0.4	0.01
92	16642	0.06	0.002	<0.1	<0.01
93	16643	<0.03	<0.001	0.1	<0.01
94	16644	<0.03	<0.001	<0.1	<0.01
95	16645	<0.03	<0.001	<0.1	<0.01
96	16646	<0.03	<0.001	0.1	<0.01
97	16647	<0.03	<0.001	1.6	0.05
98	16648	0.05	0.001	0.4	0.01
99	16649	<0.03	<0.001	0.3	0.01
100	16650	<0.03	<0.001	0.4	0.01


 ECO TECH LABORATORY LTD.

Jutta Jealouse

B.C. Certified Assayer

JJ/ejd
XLS/02
cc: Bob Weicker

ET #.	Tag #	Au (g/t)	Au (oz/t)	Ag (g/t)	Ag (oz/t)
101	16651	<0.03	<0.001	0.5	0.02
102	16652	<0.03	<0.001	0.3	0.01
103	16653	0.04	0.001	0.1	0.01
104	16654	<0.03	<0.001	0.4	0.01
105	16655	0.31	0.009	0.4	0.01
106	16656	<0.03	<0.001	0.1	0.01
107	16657	0.04	0.001	0.3	0.01
108	16658	<0.03	<0.001	0.2	0.01
109	16659	<0.03	<0.001	0.3	0.01
110	16660	<0.03	<0.001	0.2	0.01
111	16661	<0.03	<0.001	0.2	0.01

QC DATA:**Resplit:**

1	16544	0.96	0.028	0.1	0.003
36	16579	<0.03	<0.001	8.3	0.242
71	16614	0.03	0.001	0.4	0.012
106	16656	<0.03	<0.001	0.1	0.003

Repeat:

1	16544	0.99	0.029	8.2	0.24
10	16553	0.28	0.008	0.8	0.02
19	16562	<0.03	<0.001	<0.1	<0.01
36	16579	<0.03	<0.001	<0.1	<0.01
37	16580	0.73	0.021		
38	16581	0.85	0.025		
45	16588	0.03	0.001	1.3	<0.01
54	16597	0.05	0.001	0.3	0.01
67	16610	0.22	0.006		
71	16614	<0.03	<0.001	0.2	0.01
80	16623	<0.03	<0.001	<0.1	<0.01
89	16639	0.04	0.001	0.3	0.01

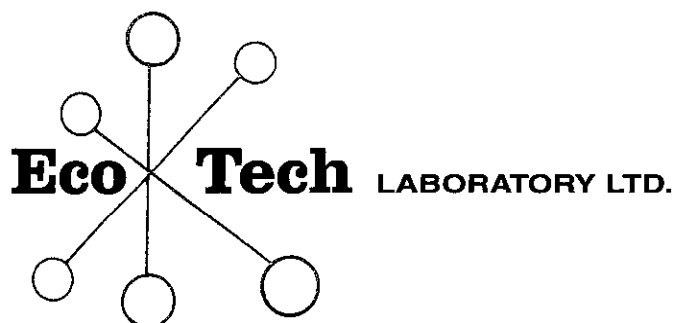
Standard:

MED'02	1.24	0.036		
MED'02	1.21	0.035		
MED'02	1.26	0.037		
MED'02	1.23	0.036		
Mp1a			69.8	2.04
Mp1a			69.7	2.03
Mp1a			69.8	2.04
Mp1a			69.6	2.03

JJ/ejd
XLS/02
cc: Bob Weicker


ECO TECH LABORATORY LTD.

Jutta Jealous
B.C. Certified Assayer



**ASSAYING
GEOCHEMISTRY
ANALYTICAL CHEMISTRY
ENVIRONMENTAL TESTING**

10041 Dallas Drive, Kamloops, B.C. V2C 6T4
Phone (250) 573-5700 Fax (250) 573-4557
email: ecotech@direct.ca

CERTIFICATE OF ASSAY AK 2002-444

SOUTHERN RIO RESOURCES LTD.

Suite 1410 - 650 West Georgia

Vancouver, BC

V6B 4N8

6-Nov-02

ATTENTION: LINDSAY BOTTOMER

No. of samples received: 169

Sample type: Core

Project #: 3TS

Shipment #: 3

Samples Submitted by: Duncan McIvor

ET #.	Tag #	Au (g/t)	Au (oz/t)	Ag (g/t)	Ag (oz/t)
1	16662	<0.03	<0.001	0.9	0.03
2	16663	<0.03	<0.001	1.2	0.04
3	16664	<0.03	<0.001	1.0	0.03
4	16665	<0.03	<0.001	0.7	0.02
5	16666	<0.03	<0.001	0.9	0.03
6	16667	<0.03	<0.001	0.6	0.02
7	16668	<0.03	<0.001	0.4	0.01
8	16669	<0.03	<0.001	0.3	0.01
9	16670	<0.03	<0.001	0.2	0.01
10	16671	<0.03	<0.001	0.5	0.02
11	16672	<0.03	<0.001	0.1	0.00
12	16673	0.03	0.001	0.5	0.02
13	16674	0.04	0.001	0.6	0.02
14	16675	0.05	0.001	0.7	0.02
15	16676	<0.03	<0.001	1.2	0.04
16	16677	0.03	0.001	1.4	0.04
17	16678	0.03	0.001	1.3	0.04
18	16679	0.04	0.001	2.3	0.07
19	16680	0.04	0.001	2.0	0.06
20	16681	0.03	0.001	1.3	0.04
21	16682	0.08	0.002	1.6	0.05
22	16683	0.07	0.002	1.3	0.04
23	16684	0.04	0.001	1.9	0.06
24	16685	0.13	0.004	1.8	0.05
25	16686	0.09	0.003	1.6	0.05
26	16687	<0.03	<0.001	0.3	0.01
27	16688	0.03	0.001	0.4	0.01
28	16689	<0.03	<0.001	1.3	0.04

ECO TECH LABORATORY LTD.

Jutta Jealous

B.C. Certified Assayer

SOUTHERN RIO RESOURCES LTD. AK2002-444

6-Nov-02

ET #.	Tag #	Au (g/t)	Au (oz/t)	Ag (g/t)	Ag (oz/t)
29	16690	0.03	0.001	1.2	0.04
30	16691	<0.03	<0.001	1.4	0.04
31	16692	<0.03	<0.001	1.3	0.04
32	16693	<0.03	<0.001	1.0	0.03
33	16694	0.04	0.001	2.0	0.06
34	16695	0.04	0.001	2.3	0.07
35	16696	0.03	0.001	1.6	0.05
36	16697	0.08	0.002	1.4	0.04
37	16698	0.81	0.024	5.3	0.16
38	16699	0.05	0.001	3.5	0.10
39	16700	0.04	0.001	3.3	0.10
40	16701	0.07	0.002	4.8	0.14
41	16702	<0.03	<0.001	0.1	0.00
42	16703	0.08	0.002	12.6	0.37
43	16704	0.09	0.003	21.1	0.62
44	16705	0.08	0.002	26.8	0.78
45	16706	0.10	0.003	25.3	0.74
46	16707	0.13	0.004	22.0	0.64
47	16708	0.72	0.021	73.9	2.16
48	16809	0.18	0.005	24.2	0.71
49	16710	0.66	0.019	130	3.79
50	16711	4.72	0.138	928	27.06
51	16712	5.90	0.172	956	27.88
52	16713	1.38	0.040	226	6.59
53	16714	0.29	0.008	86.5	2.52
54	16715	1.66	0.048	408	11.90
55	16716	2.73	0.080	612	17.85
56	16717	0.03	0.001	4.2	0.12
57	16718	0.41	0.012	39.8	1.16
58	16719	1.29	0.038	34.5	1.01
59	16720	0.86	0.025	33.6	0.98
60	16721	0.55	0.016	93.4	2.72
61	16722	0.23	0.007	19.1	0.56
62	16723	3.38	0.099	1030	30.04
63	16724	2.22	0.065	306	8.92
64	16725	1.87	0.055	421	12.28
65	16726	<0.03	<0.001	0.1	<0.01
66	16727	0.19	0.006	27.2	0.79
67	16728	0.19	0.006	19.8	0.58
68	16729	0.21	0.006	45.6	1.33
69	16730	0.06	0.002	3.5	0.10
70	16731	2.56	0.075	763	22.25
71	16732	3.06	0.089	730	21.29
72	16733	1.33	0.039	22.5	0.66
73	16734	1.27	0.037	257	7.50
74	16735	0.18	0.005	50.6	1.48
75	16736	0.09	0.003	29.6	0.86
76	16737	0.04	0.001	12.9	0.38
77	16738	0.05	0.001	5.4	0.16


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SOUTHERN RIO RESOURCES LTD. AK2002-444

6-Nov-02

ET #.	Tag #	Au (g/t)	Au (oz/t)	Ag (g/t)	Ag (oz/t)
78	16739	0.07	0.002	24.4	0.71
79	16740	0.03	0.001	6.3	0.18
80	16741	0.07	0.002	6.0	0.18
81	16742	0.05	0.001	2.9	0.09
82	16743	<0.03	<0.001	<0.1	<0.01
83	16744	0.31	0.009	15.3	0.45
84	16745	4.41	0.129	63.2	1.84
85	16746	0.03	0.001	2.3	0.07
86	16747	0.08	0.002	5.8	0.17
87	16748	0.09	0.003	4.2	0.12
88	16749	12.10	0.353	148	4.32
89	16750	0.15	0.004	9.3	0.27
90	16751	0.17	0.005	1.3	0.04
91	16752	0.05	0.001	1.8	0.05
92	16753	0.05	0.001	2.0	0.06
93	16754	0.09	0.003	1.5	0.04
94	16755	0.08	0.002	2.1	0.06
95	16756	<0.03	<0.001	<0.1	<0.01
96	16757	0.03	0.001	1.0	0.03
97	16758	0.04	0.001	0.8	0.02
98	16759	0.06	0.002	2.1	0.06
99	16760	0.06	0.002	1.6	0.05
100	16761	0.03	0.001	1.1	0.03
101	16762	0.05	0.001	0.6	0.02
102	16763	0.07	0.002	1.5	0.04
103	16764	0.12	0.003	1.6	0.05
104	16765	0.06	0.002	1.3	0.04
105	16766	0.18	0.005	1.7	0.05
106	16767	0.07	0.002	1.5	0.04
107	16768	0.07	0.002	3.2	0.09
108	16769	<0.03	<0.001	<0.1	<0.01
109	16770	0.13	0.004	4.3	0.13
110	16771	0.07	0.002	3.2	0.09
111	16772	0.43	0.013	4.8	0.14
112	16773	1.15	0.034	9.5	0.28
113	16774	0.36	0.010	5.9	0.17
114	16775	1.22	0.036	224	6.53
115	16776	1.69	0.049	448	13.07
116	16777	4.16	0.121	1980	57.74
117	16778	4.59	0.134	720	21.00
118	16779	0.37	0.011	51.8	1.51
119	16780	0.37	0.011	22.0	0.64
120	16781	0.28	0.008	22.8	0.67
121	16782	0.44	0.013	98.6	2.88
122	16783	1.22	0.036	26.2	0.76
123	16784	0.28	0.008	69.8	2.04
124	16785	<0.03	<0.001	<0.1	<0.01
125	16786	0.23	0.007	26.5	0.77
126	16787	2.65	0.077	183	5.34

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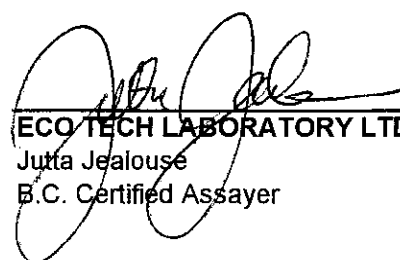
Jutta Jealous

B.C. Certified Assayer

SOUTHERN RIO RESOURCES LTD. AK2002-444

6-Nov-02

ET #.	Tag #	Au (g/t)	Au (oz/t)	Ag (g/t)	Ag (oz/t)
127	16788	0.17	0.005	7.8	0.23
128	16789	0.33	0.010	8.7	0.25
129	16790	0.80	0.023	24.2	0.71
130	16791	0.25	0.007	6.9	0.20
131	16792	3.03	0.088	45.8	1.34
132	16793	4.05	0.118	43.7	1.27
133	19794	0.58	0.017	2.0	0.06
134	16795	0.03	0.001	0.9	0.03
135	16796	<0.03	<0.001	0.8	0.02
136	16797	<0.03	<0.001	1.9	0.06
137	16798	<0.03	<0.001	0.3	0.01
138	16799	<0.03	<0.001	0.6	0.02
139	16800	<0.03	<0.001	1.1	0.03
140	16801	<0.03	<0.001	0.4	0.01
141	16802	0.03	0.001	1.3	0.04
142	16803	0.20	0.006	1.6	0.05
143	16804	0.03	0.001	1.8	0.05
144	16805	0.04	0.001	9.7	0.28
145	16806	0.03	0.001	2.4	0.07
146	16807	0.03	0.001	4.6	0.13
147	16808	0.04	0.001	3.9	0.11
148	16809	<0.03	<0.001	<0.1	<0.01
149	16810	<0.03	<0.001	0.9	0.03
150	16811	<0.03	<0.001	1.0	0.03
151	16812	0.04	0.001	1.2	0.04
152	16813	0.04	0.001	1.8	0.05
153	16814	0.26	0.008	7.0	0.20
154	16815	<0.03	<0.001	0.4	0.01
155	16816	0.04	0.001	0.8	0.02
156	16817	<0.03	<0.001	0.8	0.02
157	16818	<0.03	<0.001	1.0	0.03
158	16819	<0.03	<0.001	1.2	0.04
159	16820	<0.03	<0.001	0.8	0.02
160	16821	0.07	0.002	2.7	0.08
161	16822	<0.03	<0.001	<0.1	<0.01
162	16823	0.37	0.011	5.3	0.16
163	16824	0.15	0.004	2.3	0.07
164	16825	1.08	0.031	84.9	2.48
165	16826	0.93	0.027	28.6	0.83
166	16827	1.54	0.045	43.7	1.27
167	16828	0.98	0.029	35.9	1.05
168	16829	1.48	0.043	45.9	1.34
169	16830	2.16	0.063	140.0	4.08


ECO TECH LABORATORY LTD.
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 B.C. Certified Assayer

ET #.	Tag #	Au (g/t)	Au (oz/t)	Ag (g/t)	Ag (oz/t)
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QC DATA:**Resplit:**

1	16662	<0.03	<0.001	1.0	0.03
36	16697	0.07	0.002	1.3	0.04
71	16732	3.36	0.098	776	22.63
106	16767	0.06	0.002	1.3	0.04
141	16802	2.16	0.063	1.2	0.04

Repeat:

1	16662	<0.03	<0.001	1.0	0.03
10	16671	<0.03	<0.001	0.7	0.02
19	16680	0.04	0.001	2.0	0.06
36	16697	0.08	0.002	1.5	0.04
37	16698	0.76	0.022		
45	16706	0.10	0.003	25.3	0.74
50	16711	5.18	0.151		
51	16712	6.25	0.182		
52	16713	1.37	0.040		
54	16715	1.62	0.047		
55	16716	2.68	0.078		
58	16719	1.42	0.041	34.7	1.01
62	16723	3.49	0.102		
63	16724	2.67	0.078		
64	16725	2.07	0.060		
70	16731	2.94	0.086		
71	16732	3.04	0.089		
80	16741	0.07	0.002	6.1	0.18
84	16745	4.13	0.120		
88	16749	12.20	0.356		
89	16750	0.17	0.005	9.3	0.27
106	16767	0.07	0.002	1.5	0.04
115	16776	1.64	0.048		
116	16777	3.85	0.112		
117	16778	4.30	0.125		
124	16785	<0.03	<0.001	<0.1	<0.01
126	16787	2.57	0.075		
131	16792	3.34	0.097		
132	16793	4.20	0.122		
133	19794	0.54	0.016		
141	16802	0.03	0.001	1.3	0.04
150	16811	<0.03	<0.001	1.0	0.03
159	16820	<0.03	<0.001	0.9	0.03



ECO TECH LABORATORY LTD.

Jutta Jealous
B.C. Certified Assayer

ET #.	Tag #	Au (g/t)	Au (oz/t)	Ag (g/t)	Ag (oz/t)
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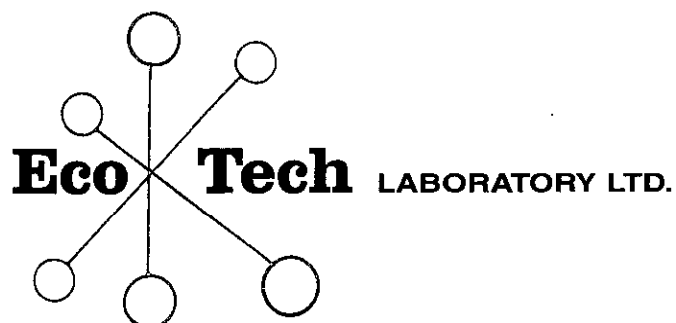
Standard:

PM171		1.39	0.041		
PM171		1.39	0.041		
PM171		1.36	0.040		
PM171		1.41	0.041		
Mpla				69.8	2.04
Mpla				69.9	2.04
Mpla				69.7	2.03

JJ/kk
XLS/02


ECO TECH LABORATORY LTD.

Jutta Jealous
B.C. Certified Assayer



**ASSAYING
GEOCHEMISTRY
ANALYTICAL CHEMISTRY
ENVIRONMENTAL TESTING**

10041 Dallas Drive, Kamloops, B.C. V2C 6T4
Phone (250) 573-5700 Fax (250) 573-4557
email: ecotech@direct.ca

CERTIFICATE OF ASSAY AK 2002-455

SOUTHERN RIO RESOURCES LTD.

Suite 1410 - 650 West Georgia

Vancouver, BC

V6B 4N8

14-Nov-02

ATTENTION: LINDSAY BOTTOMER

No. of samples received: 68

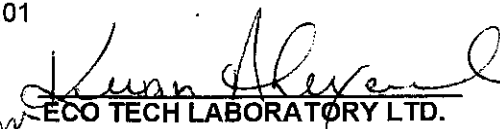
Sample type: Core

Project #: 3TS

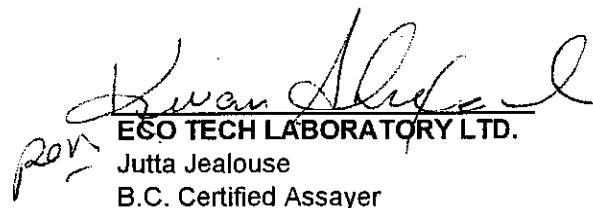
Shipment #: None given

Samples Submitted by: Duncan McIver

ET #.	Tag #	Au (g/t)	Au (oz/t)	Ag (g/t)	Ag (oz/t)
1	16831	1.79	0.052	72.4	2.11
2	16832	7.25	0.211	111.6	3.26
3	16833	5.40	0.157	64.6	1.88
4	16834	2.12	0.062	32.3	0.94
5	16835	2.92	0.085	34.5	1.01
6	16836	6.55	0.191	71.8	2.09
7	16837	<0.03	<0.001	0.1	<0.01
8	16838	0.12	0.003	5.2	0.15
9	16839	0.47	0.014	7.6	0.22
10	16840	0.19	0.006	3.6	0.11
11	16841	0.33	0.010	6.2	0.18
12	16842	2.01	0.059	14.5	0.42
13	16843	3.61	0.105	28.9	0.84
14	16844	4.74	0.138	34.7	1.01
15	16845	0.03	0.001	0.2	0.01
16	16846	<0.03	<0.001	0.1	<0.01
17	16847	<0.03	<0.001	0.1	<0.01
18	16848	<0.03	<0.001	0.2	0.01
19	16849	0.03	0.001	0.2	0.01
20	16850	0.05	0.001	0.2	0.01
21	16851	<0.03	<0.001	0.1	<0.01
22	16852	0.06	0.002	0.1	<0.01
23	16853	0.09	0.003	0.6	0.02
24	16854	<0.03	<0.001	0.8	0.02
25	16855	<0.03	<0.001	0.2	0.01
26	16856	<0.03	<0.001	0.1	<0.01

per 
ECO TECH LABORATORY LTD.
Jutta Jealouse
B.C. Certified Assayer

ET #.	Tag #	Au (g/t)	Au (oz/t)	Ag (g/t)	Ag (oz/t)
27	16857	<0.03	<0.001	0.4	0.01
28	16858	<0.03	<0.001	0.3	0.01
29	16859	<0.03	<0.001	0.5	0.02
30	16860	<0.03	<0.001	0.7	0.02
31	16861	<0.03	<0.001	0.1	<0.01
32	16862	<0.03	<0.001	0.4	0.01
33	16863	<0.03	<0.001	0.1	<0.01
34	16864	<0.03	<0.001	0.3	0.01
35	16865	0.08	0.002	0.3	0.01
36	16866	<0.03	<0.001	0.1	<0.01
37	16867	<0.03	<0.001	0.1	<0.01
38	16868	<0.03	<0.001	0.1	<0.01
39	16869	<0.03	<0.001	0.1	<0.01
40	16870	<0.03	<0.001	0.1	<0.01
41	16871	<0.03	<0.001	0.1	<0.01
42	16872	<0.03	<0.001	0.6	0.02
43	16873	<0.03	<0.001	0.3	0.01
44	16874	<0.03	<0.001	0.2	0.01
45	16875	0.07	0.002	0.4	0.01
46	16876	<0.03	<0.001	0.3	0.01
47	16877	<0.03	<0.001	0.4	0.01
48	16878	<0.03	<0.001	0.2	0.01
49	16879	0.03	0.001	1.4	0.04
50	16880	<0.03	<0.001	0.6	0.02
51	16881	0.05	0.001	0.3	0.01
52	16882	<0.03	<0.001	0.4	0.01
53	16883	<0.03	<0.001	0.1	<0.01
54	16884	<0.03	<0.001	0.2	0.01
55	16885	0.10	0.003	1.1	0.03
56	16886	0.10	0.003	0.3	0.01
57	16887	0.03	0.001	0.4	0.01
58	16888	<0.03	<0.001	0.4	0.01
59	16889	0.04	0.001	0.3	0.01
60	16890	<0.03	<0.001	0.4	0.01
61	16891	<0.03	<0.001	0.4	0.01
62	16892	<0.03	<0.001	0.7	0.02
63	16893	<0.03	<0.001	0.2	0.01
64	16894	<0.03	<0.001	0.3	0.01
65	16895	<0.03	<0.001	0.2	0.01
66	16896	<0.03	<0.001	0.3	0.01
67	16897	<0.03	<0.001	0.2	0.01
68	16898	0.05	0.001	0.1	<0.01


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 Jutta Jealous
 B.C. Certified Assayer

ET #.	Tag #	Au (g/t)	Au (oz/t)	Ag (g/t)	Ag (oz/t)
QC DATA:					
Repeat:					
1	16831	1.87	0.055	71.5	2.09
2	16832	7.10	0.207	-	-
3	16833	5.42	0.158	-	-
5	16835	2.78	0.081	-	-
6	16836	6.13	0.179	-	-
10	16840	0.21	0.006	3.5	0.10
13	16843	3.28	0.096	-	-
14	16844	4.21	0.123	-	-
19	16849	<0.03	<0.001	0.3	0.01
36	16866	<0.03	<0.001	0.1	<0.01
45	16875	0.06	0.002	0.4	0.01
54	16884	<0.03	<0.001	0.3	0.01
Resplit:					
1	16831	1.76	0.051	71.8	2.09
36	16866	<0.03	<0.001	0.1	<0.01
Standard:					
STD-M		1.26	0.037	-	-
STD-M		1.24	0.036	-	-
Mpla		-	-	70.0	2.04
Mpla		-	-	69.8	2.04

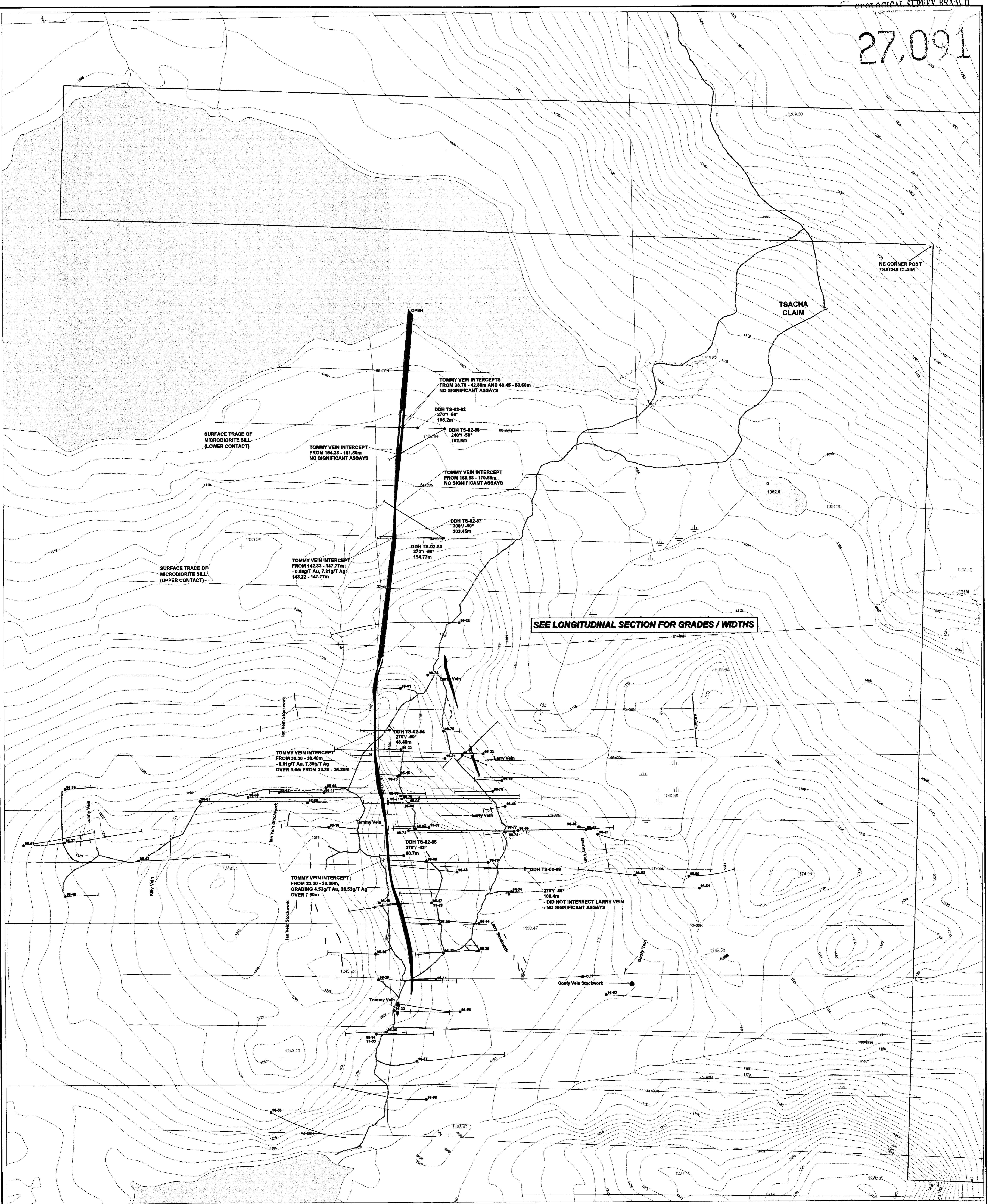
JJ/kk
XLS/02
CC: Bob Weicker

Kevin Shuford
Eco Tech LABORATORY LTD.
Jutta Jealouse
B.C. Certified Assayer

APPENDIX 3

DIAMOND DRILL HOLE LOCATION MAPS

27,091



SEE LONGITUDINAL SECTION FOR GRADES / WIDTHS

27091 ②

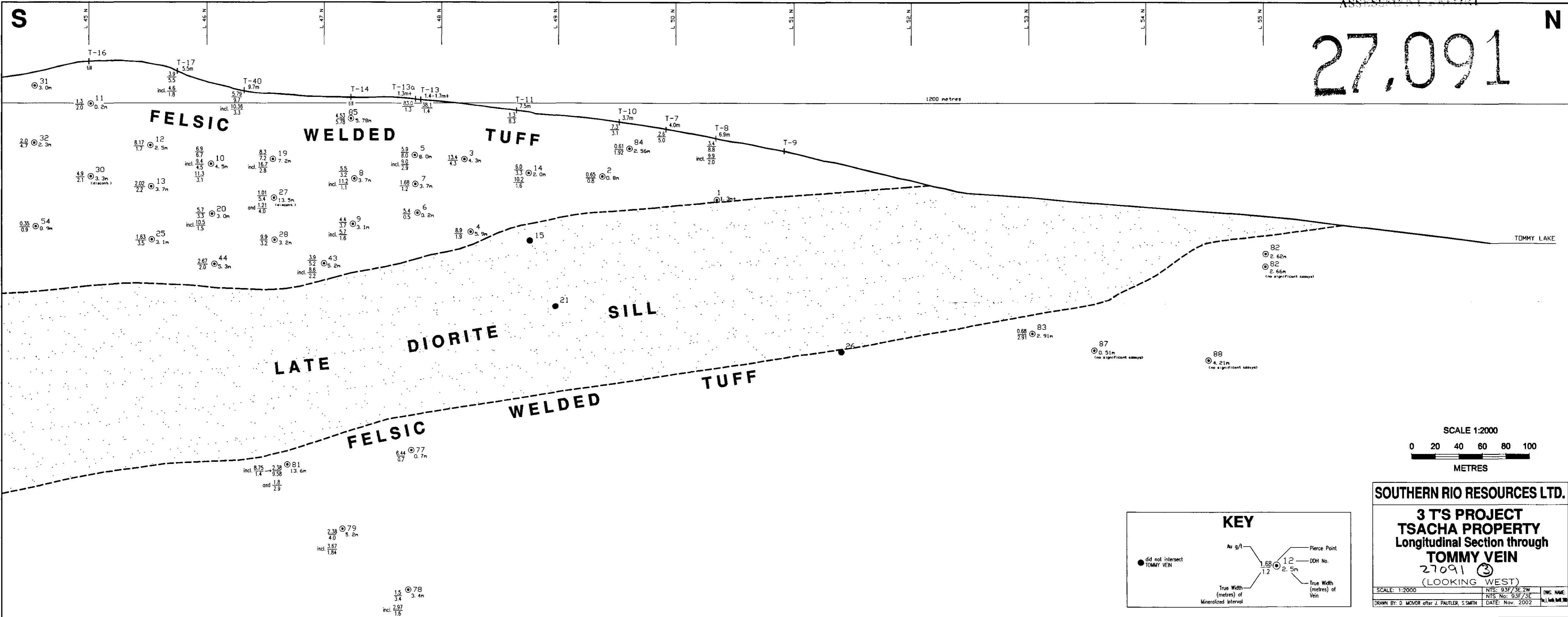
SOUTHERN RIO	
Date: 19/11/2002	TSACHA PROPERTY DRILL HOLE PLAN
Author:	
Officer: Vancouver	
Drawing:	
Scale: 1:2500	Projection: UTM Zone 10 (NAD 83)

APPENDIX 4

LONGITUDINAL SECTIONS

27.091

N



27,091^N

