

**TROUT PROPERTY**

**ASSESSMENT REPORT  
ON  
DIAMOND DRILLING**

**N.T.S.  
93 F/10**

**LATITUDE 53° 39' N, LONGITUDE 124° 45' W**

**OMINECA MINING DIVISION,  
CENTRAL BRITISH COLUMBIA**

**Prepared for:**

**Southern Rio Resources Ltd.  
1410 – 650 West Georgia Street  
VANCOUVER, British Columbia  
V6B 4N8**

**By:**

**David J. Pawliak, P. Geo.  
Nanoose Geoservices**

**June 28, 2004**

**27,468**  
SURREY SURVEY BRANCH  
ASSESSMENT REPORT

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A	Assay Certificate
B	Diamond Drill Hole Logs

## 1. SUMMARY

Diamond drilling was performed on the MAGGIE and WINNIE mineral claims which comprise part of the Trout property in the Nechako Plateau region of central British Columbia. The field work was carried out between April 3 and 16, 2004 on behalf of Southern Rio Resources Ltd. ("Southern Rio") of Vancouver, British Columbia.

The Trout property is located approximately 62 km southwest of the town of Vanderhoof. The property is comprised of 26 units in six mineral claims. These mineral claims are either owned by, or are under option to, Southern Rio.

Kerr Addison Mines Ltd. discovered mineralized breccia at the Discovery Zone in 1984. The Trout property has undergone sporadic exploration, including geological mapping, geophysical and geochemical surveys and diamond drilling, since that time. A total of 4,112.2 metres of diamond drilling in 36 holes has been completed.

The property is located within the southern Nechako Plateau. Regionally extensive, stratified volcanic and sedimentary rocks of the Lower to Middle Jurassic Hazelton Group, and the Jurassic Bowser Lake Group are intruded by the Jurassic Brooks Diorite Complex, Late Cretaceous diorite and the Eocene Copley Lake Pluton. The older rocks are overlain throughout most of the region by Eocene volcanic rocks of the Ootsa Lake Group, which typically is comprised of felsic porphyry, tuff, breccia and dacite and rhyolite flows. The Ootsa Lake Group is thought to be the host rock unit for the Discovery Zone occurrence (Carmichael, 2001). Northeasterly trending normal faults occur throughout the region, and form prominent lineaments.

The Trout mineralization is within the brecciated hangingwall of a northeasterly trending normal fault; this fault underlies a linear, northeasterly trending valley. The mineralised rock unit is comprised of round to subround pebble-sized clasts of volcanic rock cemented by quartz-adularia veinlets. The mineralised breccia is likely of hydrothermal origin. Finely banded, chalcedonic quartz veins crosscut the breccia at the Discovery Zone outcrop. Carmichael (2002) determined that the mineralised hydrothermal breccia is genetically related to the northeasterly trending, graben-bounding fault.

A total of 310.5 metres of diamond drilling was completed in four holes between April 5 and 16, 2004.

The results of the diamond drilling program show that the northeasterly trending, normal fault structure extends both downdip and along strike to the northeast from the Discovery Zone, as mapped by earlier workers (Potter, 1985; Carmichael, 2002). However, the character of the mineralised rock within the current drill holes is different from the mineralised breccia observed in the Discovery Zone outcrop. Where tested by diamond drill holes TR-04-01 and TR-04-04, the mineralised, brecciated rock in the fault hangingwall contains anomalous but sub-economic concentrations of gold and silver northeast and downdip from the Discovery Zone.

No further work should be done to test the northeastern extension of the mineralized zone at the Trout property. Possibly two or three diamond drill holes could be drilled to test the presumed southwestern extension of the mineralized zone. If these holes are attempted, the drilling should be performed with a heavy duty diamond drill rig capable of obtaining

HQ- or NQ- sized drill core.

## 2. INTRODUCTION AND TERMS OF REFERENCE

This report describes diamond drilling performed on the Trout project mineral claims in central British Columbia. This work was carried out on behalf of Southern Rio Resources Ltd. (Southern Rio) of Vancouver, British Columbia.

Mr. Lindsay Bottomer, President of Southern Rio, contracted the writer to supervise the diamond drilling. The writer personally supervised and performed geological core logging and sampling on the property between April 3 and 16, 2004.

## 3. PROPERTY DESCRIPTION AND LOCATION

The Trout project mineral claims are located in the Nechako Plateau region of central British Columbia approximately 62 km southwest of the town of Vanderhoof (Figure 1). The project area is centred at 53° 39' N latitude and 124° 45' W longitude.

The Trout mineral property is comprised of two contiguous grid-system mineral claims and four two-post mineral claims totalling 26 units (Figure 2). The mineral claims have not been legally surveyed. The mineral claims comprising the property are listed in Table 1 below. The diamond drilling that is the subject of this assessment report was performed within the MAGGIE and the WINNIE mineral claims.

**Table 1. Trout mineral claims**

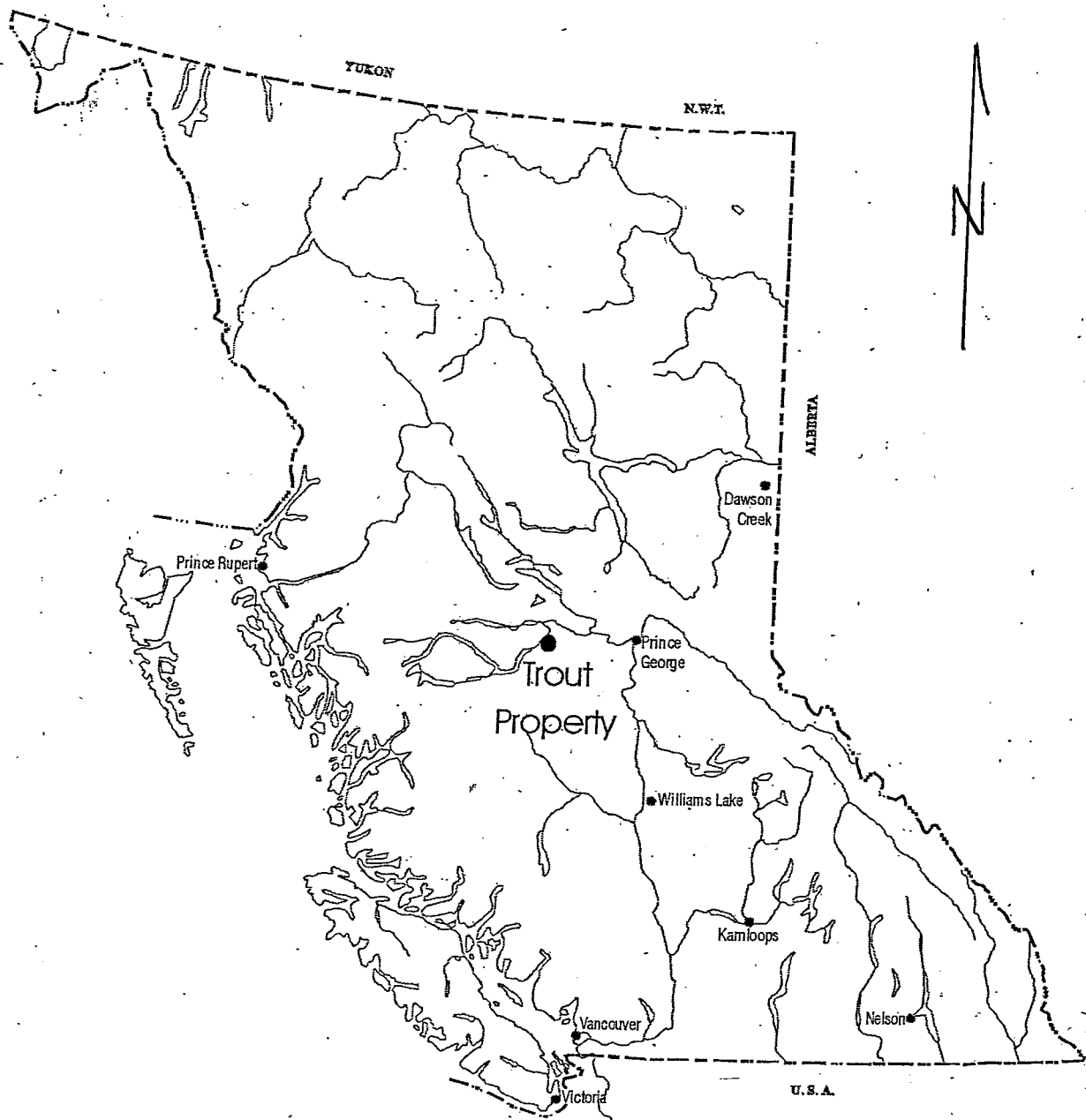
Claim Name	Tenure number	Units	Owner
WINNIE	380643	1	Robert Carmichael
MAGGIE	380644	1	Robert Carmichael
JOCELYN	380645	1	Robert Carmichael
MAGGIE	380644	1	Robert Carmichael
CUT 1	400762	10	Southern Rio
CUT 2	400763	12	Southern Rio

## 4. ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

The Trout project mineral claims are located in central British Columbia, approximately 62 km southwest of the town of Vanderhoof (Figure 1).

Active logging roads and an old drill road provide local access to the property. The Kenney Dam Road is followed from Vanderhoof to the 71 km marker, where a left turn is made onto the Swanson Logging Road. The Swanson Road is then followed for a distance of 6.5 km southwards from the Kenney Dam Road. At this point an old drill access track onto the property takes off from the Swanson Road; this old road is followed for another 1.5 km southward into the central property area.

The project area is within the Nechako Plateau of central British Columbia. Elevations in the property area range from about 850 metres to about 915 metres a.s.l. The terrain consists of rounded hills separated by swamps and small lakes. Pine, spruce, aspen and alder trees grow in the property area. Most of the pine trees are dead or dying due to the



**SOUTHERN RIO RESOURCES LTD.**

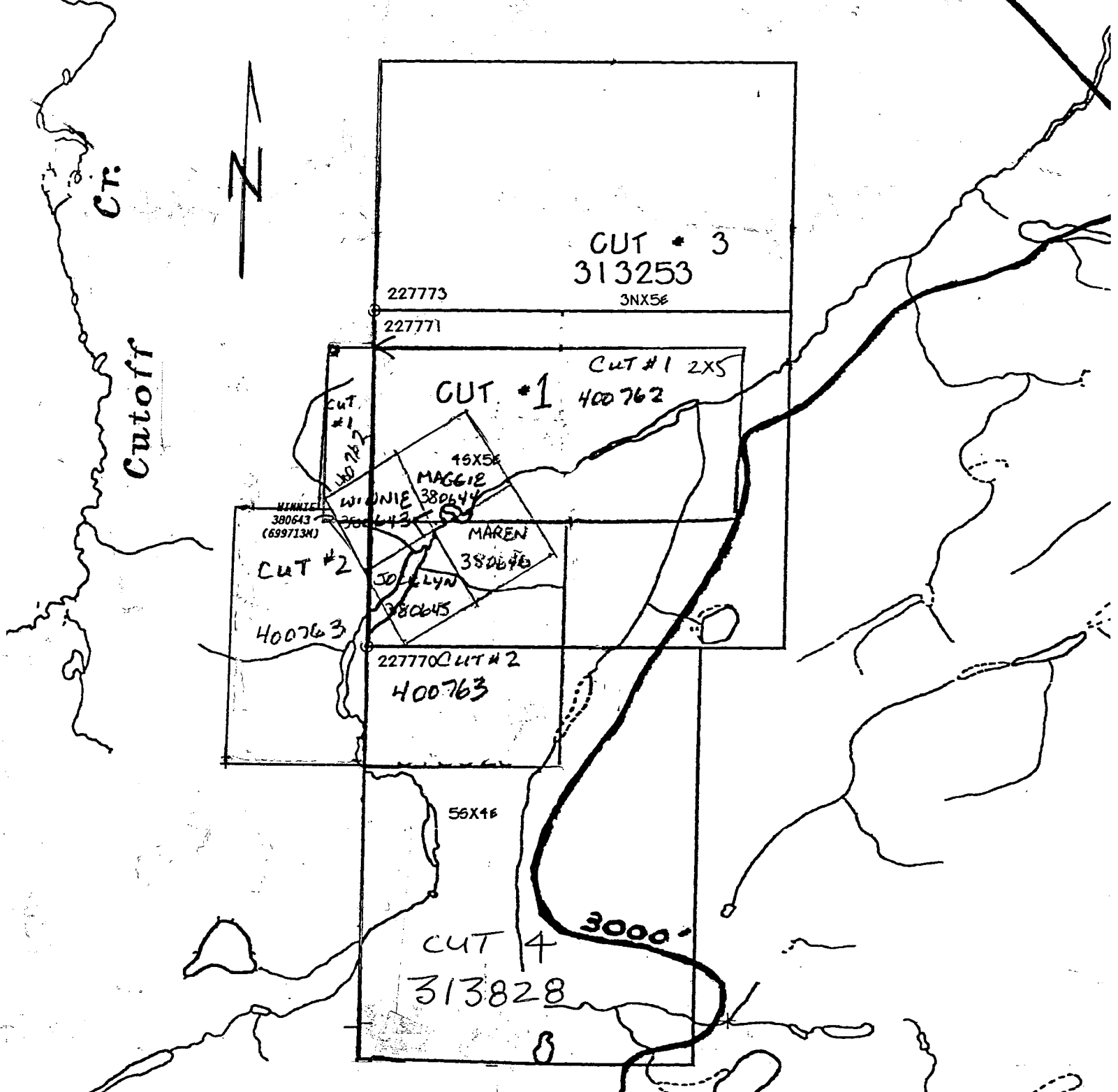
**TROUT PROJECT  
PROPERTY  
LOCATION MAP**

OMINECA MINING DIVISION

DRAWN BY: D. PAWLIUK

DATE: May 2004

FIG.  
1



MINERAL PLACER RESERVE  
 OIC 396, 16 2 60  
 RELEASE REQUIRED

**SOUTHERN RIO RESOURCES LTD.**

**TROUT PROJECT  
 CLAIM MAP**

OMINECA MINING DIVISION		
SCALE: 1:131,680	NTS: 93F/10	FIG.
DRAWN BY: D. PAWLIUK	DATE: May 2004	2

mountain pine beetle infestation. Thick glacial till covers the bedrock in most places, and outcrop exposure is sparse. Soils are poorly developed. Summer weather is cloudy with occasional showers, and winters are dry and cold.

## **5. HISTORY**

Tipper (1963) geologically mapped the region at 1:250,000 scale for the Geological Survey of Canada. More recent, detailed mapping in the property area was carried out by Anderson, Snyder, Resnick and Barnes (1998) of the Geological Survey of Canada.

The property area has been explored since 1984, following the discovery of gold-bearing quartz veins by Kerr Addison Mines Ltd. (Kerr Addison). Kerr Addison staked the occurrence and performed rock trenching, geochemical soil and rock sampling, geological mapping, line-cutting and IP/resistivity and ground magnetic surveying during late 1984; this work was followed-up by diamond drilling and petrographic studies (Potter, 1985).

Welcome North Mines Ltd. conducted rock trenching, geochemical soil sampling, geological mapping and reverse circulation drilling on the property in 1987 (Schmidt, 1987). They drilled an additional 1,049.6 metres in nine diamond drill holes in 1990 (Carmichael, 2001). The mineral claims were then allowed to lapse.

Cogema Resources staked the Trout prospect in 1993, and performed airborne geophysical surveys that were followed by 12 diamond drill holes totalling 1,249.6 metres in 1994. Phelps Dodge Corporation of Canada (Phelps Dodge) optioned the prospect from Cogema in 1995. Phelps Dodge conducted geological mapping, rock and soil sampling and IP surveying, and re-logged the core from all previous diamond drilling on the property. This work was followed by diamond drilling of four holes totalling 615.1 metres. After Cogema's work the mineral claims were again allowed to lapse.

Robert Carmichael staked the WINNIE, MAGGIE, JOCELYN and MAREN mineral claims over the Discovery Zone at the Trout property in September, 2000. Carmichael exposed, mapped and sampled the "Rainbow Vein" within the Discovery Zone breccia during 2001. Erratic precious metal concentrations of up to 43.47 g/t gold and 298.3 g/t silver occur within the Rainbow Vein (Carmichael, 2001).

Southern Rio Resources Ltd. (Southern Rio) optioned the property from Carmichael in March 2003, and two grid-system mineral claims were subsequently staked to enlarge the property area, and to cover the interpreted extensions of the mineralised breccia zone.

## **6. REGIONAL GEOLOGY**

The Trout property is located within the southern Nechako Plateau. Igneous and sedimentary rocks of Jurassic to Tertiary age underlie the region. These rocks form part of the Stikine Terrane. The geology of the region is shown on Figure 3.

The property is within the Big Bend Creek map-area (Anderson, Snyder, Resnick and Barnes, 1998). Regionally extensive, stratified volcanic and sedimentary rocks of the Lower to Middle Jurassic Hazelton Group and the Jurassic Bowser Lake Group are intruded by the Jurassic Brooks Diorite Complex, Late Cretaceous diorite and the Eocene Copley Lake Pluton.

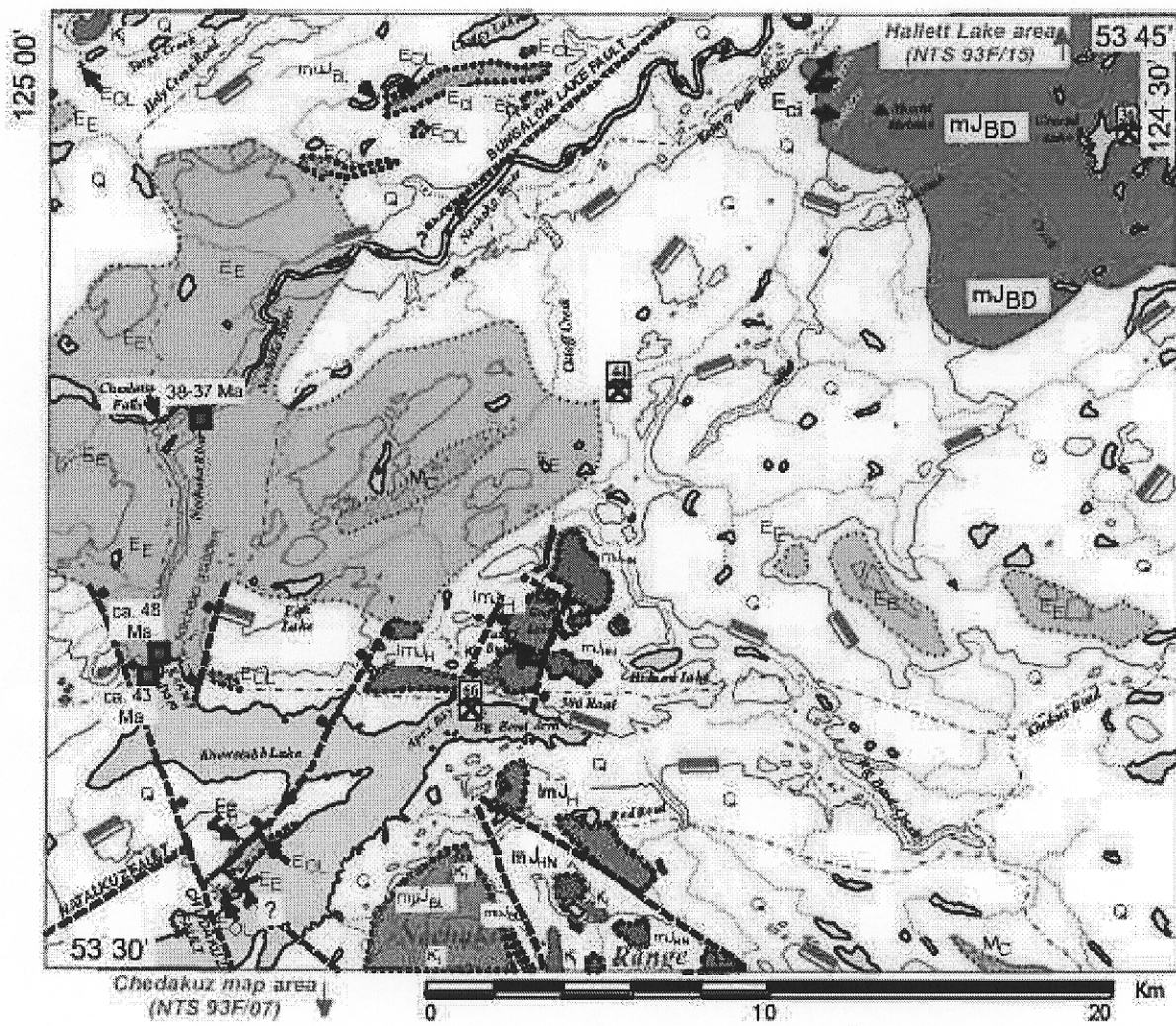


Figure 3: Geology of the Big Bend Creek map sheet (Anderson et.al., 1998)



The older rocks are overlain throughout most of the region by Eocene volcanic rocks of the Ootsa Lake Group, which typically is comprised of felsic porphyry, tuff, breccia and dacite and rhyolite flows. The Ootsa Lake Group is thought to be the host rock unit for the Trout occurrence (Carmichael, 2001). Basalt flows of the Eocene Endako Group and the younger, Miocene Chilcotin Group are the youngest rock units within the region. Northeasterly trending normal faults occur throughout the region, and form prominent lineaments.

## **7. PROPERTY GEOLOGY**

The Ootsa Lake Group is thought to be the host rock unit for the Trout occurrence, although other workers have described the host rocks as belonging to either the Eocene Endako Group or the Cretaceous Kasalka Group (Carmichael, 2001).

The Trout occurrence is within the brecciated hangingwall of a major, northeasterly trending normal fault that underlies a linear, northeasterly trending valley (Figure 4). Andesite porphyry flows, flow breccias and tuffs are the main rock types nearby the Trout occurrence.

## **8. MINERALIZATION**

The Trout occurrence is within the brecciated hangingwall of a northeasterly trending normal fault. The mineralised rock unit is comprised of round to subround pebble-sized clasts of volcanic rock cemented by quartz-adularia veinlets. This mineralised breccia is likely of hydrothermal origin. Finely banded, chalcedonic quartz veins crosscut the breccia at the Discovery Zone outcrop. Carmichael (2002) determined that the mineralised hydrothermal breccia is genetically related to a northeasterly trending, graben-bounding fault.

## **9. DRILLING**

A total of 310.5 metres of diamond drilling was completed in four holes at the Trout property between April 5 and 16, 2004. Falcon Drilling Ltd. of Prince George, British Columbia, performed the drilling using a custom-built drill rig which recovered BTW-sized drill core.

The drill cores are stored in labelled wooden boxes that are stacked in a storage area on the property. The coreboxes are covered with plywood sheeting, to protect them from rain and snow.

The writer, assisted by Daniel Meldrum M.Sc., supervised the diamond drilling.

### **Drill hole TR-04-01**

This hole was drilled to test the hangingwall of the interpreted northeasterly trending fault at the Trout occurrence, northeast along strike from the Discovery Zone breccia outcrop (Figure 4).

Drill hole TR-04-01 intersected andesitic conglomerate from 16.15 to 66.67 m depth. From 66.67 m to 91.84 m depth the hole cut fine grained, medium brown-maroon andesite porphyry. A large fault occurs from 89.70 to 91.08 m depth. From 91.84 to 127.79 m depth light greyish brick red to light maroon, medium grained rhyolite lapilli tuff was intersected.

This rock unit contains 1 % light grey quartz veinlets that are mineralised by traces of finely disseminated pyrite (Appendix B). A large fault zone occurs from 106.59 to 108.55 m depth (Figure 5).

The intercept from 101.84 m to 103.84 m depth assayed 0.11 g/t gold and 0.1 g/t silver across 2 metres (Appendices A, B). This was the best assay from the hole, and occurs within the hangingwall of the large fault from 106.59 m to 108.55 m depth. This fault is likely the major, northeasterly trending normal fault interpreted by Carmichael (2002) and other, earlier workers on the property.

From 127.79 to 142.65 m depth dark maroon to brick red, fine grained andesite porphyry was cored. A large fault was intersected from 129.73 to 130.45 m depth, near the upper andesite porphyry contact. Hole TR-04-01 was stopped at 142.65 m depth.

#### **Drill hole TR-04-02**

This hole was drilled to test the hangingwall of the interpreted northeasterly trending fault structure to the southwest of the Discovery Zone (Figure 4).

From 3.05 to 14.65 m depth dark maroonish brown, locally weakly magnetic andesite porphyry was cored. From 14.65 to 40.45 m depth, andesitic lapilli tuff / conglomerate was intersected (Figure 6). This rock is a dark brick red to dark greyish maroon, medium grained fragmental; coarse clasts average 5 mm across and form about 50 % of the rock volume.

A large fault zone marked by broken and ground core was intersected from 30.53 to 40.45 m depth. The hole was abandoned at 40.45 m depth because of difficult drilling conditions. No core samples from this hole were submitted for assay.

#### **Drill hole TR-04-03**

This hole was drilled to test the hangingwall of the interpreted northeasterly trending fault structure to the southwest of the Discovery Zone, and southwest of drill hole TR-04-02 (Figure 4).

Drill hole TR-04-03 was abandoned at a depth of 20.73 m because of bad ground and difficult drilling conditions. A few pieces of andesitic conglomerate rubble were recovered from the bottom of the hole (Figure 7).

#### **Drill hole TR-04-04**

This hole was drilled to test the main mineralised breccia zone downdip of both earlier drill hole TR85-1 and downdip of the Discovery Zone (Figures 4, 8).

From 26.21 to 106.68 m depth medium to light greyish green to locally maroon andesite was cored; this rock is soft, crushed and clay-altered throughout (Appendix B).

The rock is moderately brecciated and healed by 3 % calcite veinlets and 1 % quartz veinlets from 90.96 to 93.32 m depth, in the hangingwall of a fault from 93.32 to 95.50 m depth. This fault is likely the major northeasterly trending fault interpreted to control the hydrothermal brecciation and associated mineralization at the Discovery Zone (Figure 8).

The best assay result from this hole came from 92.10 to 93.10 m depth, within the brecciated interval; this sample assayed 0.6 g/t gold and 1.7 g/t silver across a width of 1.0 metre.

A second fault zone was intersected from 100.86 to 102.79 m depth in hole TR-04-04. From 102.79 to the end of the hole at 106.68 m depth andesite porphyry was cored.

## **10. SAMPLE PREPARATION, ANALYSES AND SECURITY**

The writer geologically logged the drill core samples. Selected intervals of core were then split lengthwise using a Longyear wheel-type coresplitter. The core samples were bagged, and then shipped via bus from Vanderhoof to Eco Tech Laboratory Ltd. in Kamloops, British Columbia.

The samples were assayed for gold and silver by geochemical fire assay. Subsamples of 30 gm were assayed.

An assay certificate forms Appendix A. Geological logs of the diamond drill cores are presented in Appendix B.

## **11. DATA VERIFICATION**

A duplicate sample pair, numbers 11566 and 11567, and one blank sample, number 11564, were inserted into the sample stream as check samples. The assays for these samples are reported with the regular assays in Appendices A and B.

Sample 11566 contains 0.18 g/t gold and 0.9 g/t silver; duplicate sample 11567 contains 0.25 g/t gold and 0.7 g/t silver. Blank sample 11564 contains zero gold and zero silver (Appendix A).

## **12. INTERPRETATION AND CONCLUSIONS**

The results of the diamond drilling program show that the northeasterly trending, normal fault structure extends both downdip and along strike to the northeast from the Discovery Zone, as interpreted by earlier workers (Potter, 1985; Carmichael, 2002). However, the character of the mineralised rock within the current drill holes is different from the mineralised breccia observed in the Discovery Zone outcrop.

Where tested by diamond drill holes TR-04-01 and TR-04-04, the mineralised, brecciated rock in the fault hangingwall contains anomalous but sub-economic concentrations of gold and silver. These holes were drilled northeast along strike from, and downdip from, the Discovery Zone.

The interpreted southwestern extension of the mineralised zone along the northeasterly trending fault was not tested during the current drilling program because of difficult drilling conditions.

## **13. RECOMMENDATIONS**

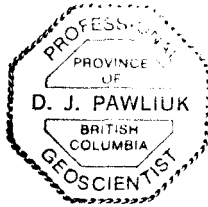
No further work should be done to test the northeastern extension of the mineralized zone at the Trout property.

Two or three diamond drill holes could be drilled to further test the presumed southwestern extension of the mineralized zone. This area was not tested effectively during the current drilling program due to difficult overburden conditions and the limited capacity of the drill rig. If these holes are attempted, the drilling should be performed with a heavy duty diamond drill rig capable of obtaining HQ or NQ sized drill core, in order to have a better chance of reaching the target depth.

Respectfully submitted,



David J. Pawliuk, P. Geo.



#### 14. EXPENDITURES

Expenditures during the period January 1 – May 31, 2004 amounted to \$62,781.70. All of these expenditures related to, or were in support of, the diamond drilling program completed on the property in April 2004. A breakdown of the expenditures is given below.

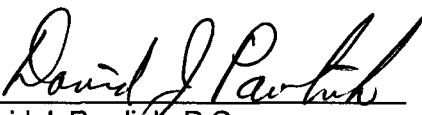
Geology (supervision, reports)	\$ 9,626.25
Travel	2,982.67
Camp Costs (accommodation, supplies)	465.63
Field Supplies	1,134.47
Assays	518.25
Contract Diamond Drilling	<u>48,054.43</u>
<u>TOTAL</u> .....	\$ 62,781.70

## 15. CERTIFICATE of AUTHOR

I, David J. Pawliuk, P.Geol. do hereby certify that:

1. I am currently employed as a consulting geologist by:  
Nanoose Geoservices  
2960 Anchor Way  
Nanoose Bay, British Columbia, Canada  
V9P 9G2
2. I graduated with a degree of Bachelor of Science with Specialization in Geology from the University of Alberta in 1975.
3. I am a member of the Association of Professional Engineers and Geoscientists of British Columbia, and of the Association of Professional Engineers, Geologists and Geophysicists of Alberta.
4. I have worked as a geologist for more than 20 years since my graduation from university.
5. I am responsible for the preparation of this assessment report. I was on-site at the Trout property from April 3 to 16, 2004, and performed and supervised the geological core logging and sampling.

Dated this <sup>H</sup>28 Day of June, 2004.

  
\_\_\_\_\_  
David J. Pawliuk, P.Geol.



## 16. REFERENCES

Anderson, R.G., Snyder, L.D., Resnick, J. and Barnes, E. (1998) Geology of the Big Bend Creek map area, central British Columbia; in Current Research 1998-A, Geological Survey of Canada, p. 145 – 154.

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Potter, R. (1985) TROUT property, assessment report on geology, geochemistry, geophysics and diamond drilling, Kerr Addison Mines Ltd.; British Columbia Ministry of Energy, Mines and Petroleum Resources assessment report 13973.

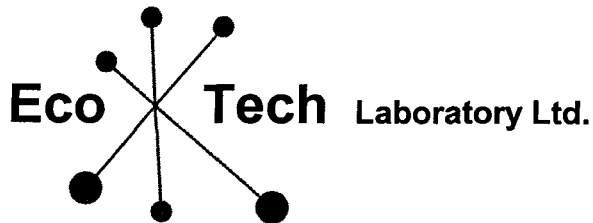
Schmidt, A.J. (1987) Trenching, sampling, geological mapping, geochemical soil survey, rotary drilling on the Trout Group, Welcome North Mines Ltd. and Kerr Addison Mines Ltd.; British Columbia Ministry of Energy, Mines and Petroleum Resources assessment report 16733.

Tipper, H.W. (1963) Nechako River map-area, British Columbia; Geological Survey of Canada Memoir 324.

**APPENDIX A**

**ANALYTICAL CERTIFICATE**





ASSAYING  
GEOCHEMISTRY  
ANALYTICAL CHEMISTRY  
ENVIRONMENTAL TESTING

10041 Dallas Drive, Kamloops, BC V2C 6T4  
Phone (250) 573-5700 Fax (250) 573-4557  
E-mail: info@ecotechlab.com  
www.ecotechlab.com

**CERTIFICATE OF ASSAY AK 2004-208**

**SOUTHERN RIO RESOURCES**  
Suite 1410, 650 W Georgia  
Box 11584  
Vancouver, BC, V6B 4N8

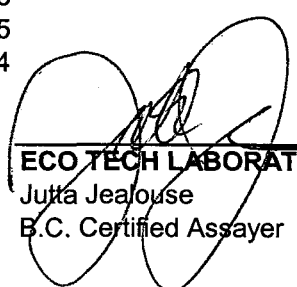
*Trout*

23-Apr-04

**ATTENTION: LINDSAY BOTTOMER**

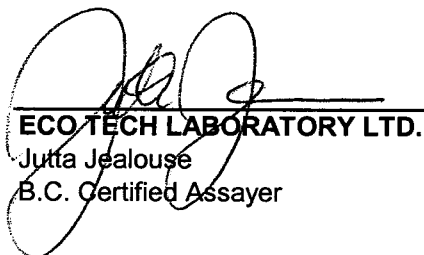
No. of samples received: 25  
Sample type: Core  
Project #: *Trout*  
Shipment#: 2004-01  
Samples Submitted by: David Pawliuk

ET #.	Tag #	Au (g/t)	Au (oz/t)	Ag (g/t)	Ag (oz/t)
1	11551	0.03	0.001	0.3	0.01
2	11552	0.05	0.001	0.3	0.01
3	11553	0.03	0.001	0.3	0.01
4	11554	<0.03	<0.001	0.2	0.01
5	11555	0.05	0.001	0.1	<0.01
6	11556	<0.03	<0.001	0.1	<0.01
7	11557	0.06	0.002	0.1	<0.01
8	11558	0.11	0.003	0.1	<0.01
9	11559	<0.03	<0.001	0.1	<0.01
10	11560	<0.03	<0.001	0.1	<0.01
11	11561	<0.03	<0.001	0.2	0.01
12	11562	<0.03	<0.001	0.1	<0.01
13	11563	0.29	0.008	2.4	0.07
14	11564	<0.03	<0.001	<0.1	<0.01
15	11565	0.30	0.009	1.0	0.03
16	11566	0.18	0.005	0.9	0.03
17	11567	0.25	0.007	0.7	0.02
18	11568	0.12	0.003	0.5	0.02
19	11569	0.28	0.008	1.1	0.03
20	11570	0.60	0.017	1.7	0.05
21	11571	0.20	0.006	2.1	0.06
22	11572	0.24	0.007	1.1	0.03
23	11573	0.23	0.007	1.1	0.03
24	11574	0.12	0.003	1.7	0.05
25	11575	0.05	0.001	1.3	0.04

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

ET #.	Tag #	Au (g/t)	Au (oz/t)	Ag (g/t)	Ag (oz/t)
<b>QC DATA:</b>					
<b>Resplit:</b>					
1	11551	<0.03	<0.001	0.2	0.01
<b>Repeat:</b>					
1	11551	<0.03	<0.001	0.3	0.01
10	11560	<0.03	<0.001	0.1	0.00
13	11563	0.32	0.009		
17	11567	0.21	0.006		
20	11570	0.63	0.018		
24	11574	0.11	0.003		
<b>Standard:</b>					
OX123		1.78	0.052	-	-

JJ/kk  
XLS/04



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

**APPENDIX B**

**DIAMOND DRILL LOGS**

Hole: TR-04-01                      Started: April 5, 2004  
 Az: 137 (collar)                      Completed: April 8, 2004  
 Dip: -52 (collar)                      Logged: April 2004  
 Dip: -44.5 Acid test @142.65m      Logged by: D. Pawliuk  
 Core size: BTW                      Length: 142.65  
 Purpose: Test NW-erly dipping fault along trend from Discovery Zone to Northeast of Discovery zone

Type	From	To	Description
Major	0.00	15.24	Casing
Major	15.24	16.15	TILL (?) sticky brown mud and sand size rock fragments.
Major	16.15	52.23	medium chocolate brown-maroon ANDESITIC CONGLOMERATE. Rocks say 75-80% pebbles and coarse sand grains within fine sandy brick red-brown matrix. Coarse clasts range from well-rounded to angular mostly subrounded. Unit appears to have been lapilli tuff reworked by water. Unsorted; no bedding or sedimentary structures seen. Coarse clasts variety of volcanic rock types. Soft, easily scratched. 0.5% irregular discontinuous off-white calcite veinlets to 6 mm wide. No quartz veinlets seen. Weakly chlorite altered with dark green chlorite spots (with faint margins) along fracture surfaces. Also soft aqua green colored blebby masses to 3X6 mm across. Rare specs disseminate pyrite < 0.5 mm throughout. Weakly magnetic.
Minor	23.77	26.00	FAULT; pale maroon-green, finely crushed, clayey; ~50% recovery. Lower fault margin at 70°.
Minor	29.47	29.63	FAULT; Sandy (60%)-clayey (40%) gouge; broken core @ margins; cannot determine orientation.
Point	37.50		37.5 m depth and below moderately to weakly chlorite altered; chlorite appears to increase within and near faults
Minor	39.01	41.33	FAULT ZONE. Sandy and clayey gouge 65%, variably crushed conglomerate fragments 35%. Lower margin @ ~23° to core axis. Below 41.33 m depth rock locally crushed, faulted across intervals up to 50 cm wide.
Minor	48.76	52.23	light-medium green, fine grained, moderately to weakly magnetic; moderately chlorite ALTERED ROCK. Weakly-moderately clay altered. Soft, easily scratched; Traces finely disseminated to sooty pyrite. Broken core @ contact with overlying conglomerate but likely discrete contact @ 45° to core axis.
Major	52.23	54.95	dark brown-maroon ANDESITE PORPHYRY. 10% elongate euhedral to subhedral plagioclase phenocrysts average 2.5 mm long; weakly magnetic. Massive. Traces disseminated pyrite.
Major	54.95	66.67	ANDESITIC CONGLOMERATE, generally as 16.15 - 52.23 m above, except here rock ~40% coarse clasts, 60% fine sand-sized matrix. Moderately chlorite altered; weakly clay altered above 60.33 m depth. This upper altered interval contains several sections of finely crushed, faulted core; clay and chlorite alteration related to these faults. Overall coarse clasts tan colored (clay altered). Nonmagnetic.
Point	59.40		FAULT @ 35° marked by 5 cm sandy gouge.

Type	From	To	Description
Major	66.67	91.84	andesite porphyry. Medium brown-maroon, fine grained similar to rock from 52.23-54.95 m above. Soft, easily scratched with nail. Locally weakly magnetic. Pale buff colored flow bands (?) @ 40° @ 67.24 m depth.
Minor	70.30	71.02	FAULT; moderately to finely broken core with sandy and clayey gouge bands to 4 cm wide along fracture @ ~50°.
Point	75.59		below 75.59 m depth ANDESITE PORPHYRY weakly bleached, light grayish maroon to light grayish brick red in color.
Point	75.76		FAULT; 1 cm of finely broken, sandy gouge on fracture @ 50°.
Minor	78.91	80.75	FAULT; finely broken to moderately broken core and gouge; cannot determine orientation.
Point	81.94		FAULT; 10 cm finely broken core along fracture @ 58°.
Minor	83.62	83.82	FAULT; 20 cm finely broken core and sandy gouge; cannot determine orientation. Say 5% pale gray sand sized vein quartz fragments within gouge.
Minor	84.73	85.46	FAULT; moderately to finely broken core; cannot determine orientation. 10% vein quartz fragments across 7 cm @ bottom of interval.
Point	88.35		FAULT; 12 cm of finely broken core and clayey gouge; cannot determine orientation.
Minor	89.70	91.08	FAULT ZONE; finely crushed sandy core and clayey gouge along fracture is @ 48-52° to core axis.
Major	91.84	127.79	RHYOLITE LAPILLI TUFF; light grayish brick red to light maroon, medium grained, faintly to moderately banded rock 15% off-white blocky feldspar grains average 2mm across. Say 10-20% finely disseminated brick red to maroon hematite 1% light gray quartz veinlets which contain traces finely disseminated pyrite. Above 95.75 m depth rock is brecciated, healed by vein quartz and then brecciated and faulted again. Faults @ ~40° to core axis but difficult to determine. Say 4% vein quartz from 91.84-95.75 m depth. Likely discrete contact with overlying andesite porphyry; broken core at contact. The vein quartz above 95.75 m depth locally has fine millimeters scale chalcedonic bands. Local dusty disseminated hematite within quartz veinlets giving them reddish tinge. Local faint green chlorite (?) as well within the later (?) crosscutting quartz veinlets. Quartz veinlets within Rhyolite lapilli tuff mainly @ ~40° 50° to core axis but occasionally sub parallel to core axis; traces-0.5% pyrite, finely disseminated and as blebs up to 2 mm across.
Sample	91.84	92.84	11551
Sample	92.84	93.84	11552
Sample	93.84	94.84	11553
Sample	94.84	95.84	11554
Sample	95.84	97.84	11555
Sample	97.84	99.84	11556

Type	From	To	Description
Point	98.27		light brownish gray QUARTZ VEIN, 5 cm wide @ 37° contains 30% variably assimilated wall rock fragments. Overall < 0.5% off white calcite veinlets up to 17 mm wide within Rhyolite lapilli tuff. Nonmagnetic.
Sample	99.84	101.84	11557
Sample	101.84	103.84	11558
Sample	103.84	105.84	11559
Sample	105.84	107.84	11560
Minor	106.59	108.55	FAULT ZONE; moderately broken and ground core. Upper contact @ ~77°. Broken and ground core at bottom of fault; here cannot determine orientation.
Sample	107.84	109.84	11561
Minor	113.69	127.79	Below 113.69 m depth RHYOLITE LAPILLI TUFF crushed, broken into pieces averaging ~3 cm across. Gradational change to more broken, crushed rock at depth.
Sample	119.00	121.00	11562
Point	119.07		FAULT slip @ 58°.
Point	119.36		creamy white CALCITE VEIN 4 cm wide @ 50°.
Minor	126.64	127.79	FAULT ZONE; 60% rounded, milled Rhyolite lapilli tuff fragments in matrix of grayish white clayey gouge and sand-sized gouge. Faults oriented @ ~70° to core axis (banding within fault zone). Fault zone forms contact with underlying andesite.
Major	127.79	142.65	ANDESITE PORPHYRY; dark maroon to brick red with local pale grayish green clayey fault intervals. Andesite very weakly magnetic, fine grained say 5% elongate subhedral plagioclase phenocrysts average 1 mm length. 0.5% irregular calcite veinlets to 139.23 m depth. Below 139.23 m depth 3% calcite as lensoid to rounded vein fragments within sheared rock. Generally broken core.
Minor	129.73	130.45	light grayish green FAULT. Intervals say 50% clayey gouge. Cannot determine orientation.
Point	130.15	139.23	moderately broken core.
Point	130.96		broken CALCITE VEIN 4 cm wide @ 70°; 3% subhedral pyrite cubes average 2.5 mm across 2 cm both above and below the vein.
Minor	131.75	132.78	FAULT; crushed milled andesite porphyry fragments in silty gouge; 1% pyrite grains within gouge; lower margin @ 58°.
Minor	136.57	138.15	FAULT ZONE; pale grayish green to brick red clayey gouge forms say 65% rock volume; remainder sand to pebble sized crushed rock fragments. Orientation @ ~70° to core axis.
Point	139.43		foliation @ 65°.
Point	142.65		EOH

Hole: TR-04-02                      Started: April 9, 2004  
 Az: 137 (collar)                      Completed: April 11, 2004  
 Dip: -50 (collar)                      Logged: April 2004  
 Dip: none taken                      Logged by: D. Pawliuk  
 Core size: BTW                      Length: 40.45  
 Purpose: Test interpreted NE-erly fault zone below beaver pond to SW of Discovery Zone

Type	From	To	Description
Major	0.00	3.05	CASING
Major	3.05	14.65	ANDESITE PORPHYRY; dark maroonish brown, locally weakly magnetic. Plagioclase phenocrysts say 25-30% rock volume, blocky pale gray, average 2.5 mm length. Fault contact with underlying unit marked by 3 cm clayey and sand gouge between fractures @ 33°.
Major	14.65	40.45	ANDESITIC LAPILLI TUFF / CONGLOMERATE; dark, brick red to dark grayish maroon, medium grained fragmental rock with subangular to subrounded coarse clasts average 5 mm across forming ~50% of rock volume. Matrix medium grained ash tuff (?) / sand. Locally weakly magnetic. < 0.5% irregular off-white calcite veinlets average ~1.5 mm wide. Coarser clasts variety of volcanic rocks, variably stained by hematite. Local traces of fine disseminated pyrite. Poor core recovery; numerous intervals of ground core and broken core.
Minor	14.90	15.21	FAULT; silty gouge and broken core fragments; cannot determine orientation.
Minor	19.20	20.12	FAULT(?); moderately to finely broken core and sand.
Minor	21.41	22.52	FAULT (?); broken, soft, somewhat crushed core.
Point	24.93		FAULT; crushed core long fracture subparallel to core axis.
Point	28.26		FAULT; 12 cm crushed core between fractures @ ~40° to core axis.
Minor	30.53	40.45	FAULT ZONE; ground core, moderately to finely broken, crushed core and sandy gouge; poor recovery. Local rare off-white calcite veinlets; no quartz veinlets seen. Hole abandoned because drilling progress stymied by poor ground conditions
Point	40.45		EOH

Hole: TR-04-03                      Started: April 11, 2004  
 Az: 137 (collar)                      Completed: April 13, 2004  
 Dip: -52.5 (collar)                      Logged: April 2004  
 Dip: none taken                      Logged by: D. Pawliuk  
 Core size: BTW                      Length: 20.73  
 Purpose: Test interpreted NE-erly trending fault to SW of hole TR04-02

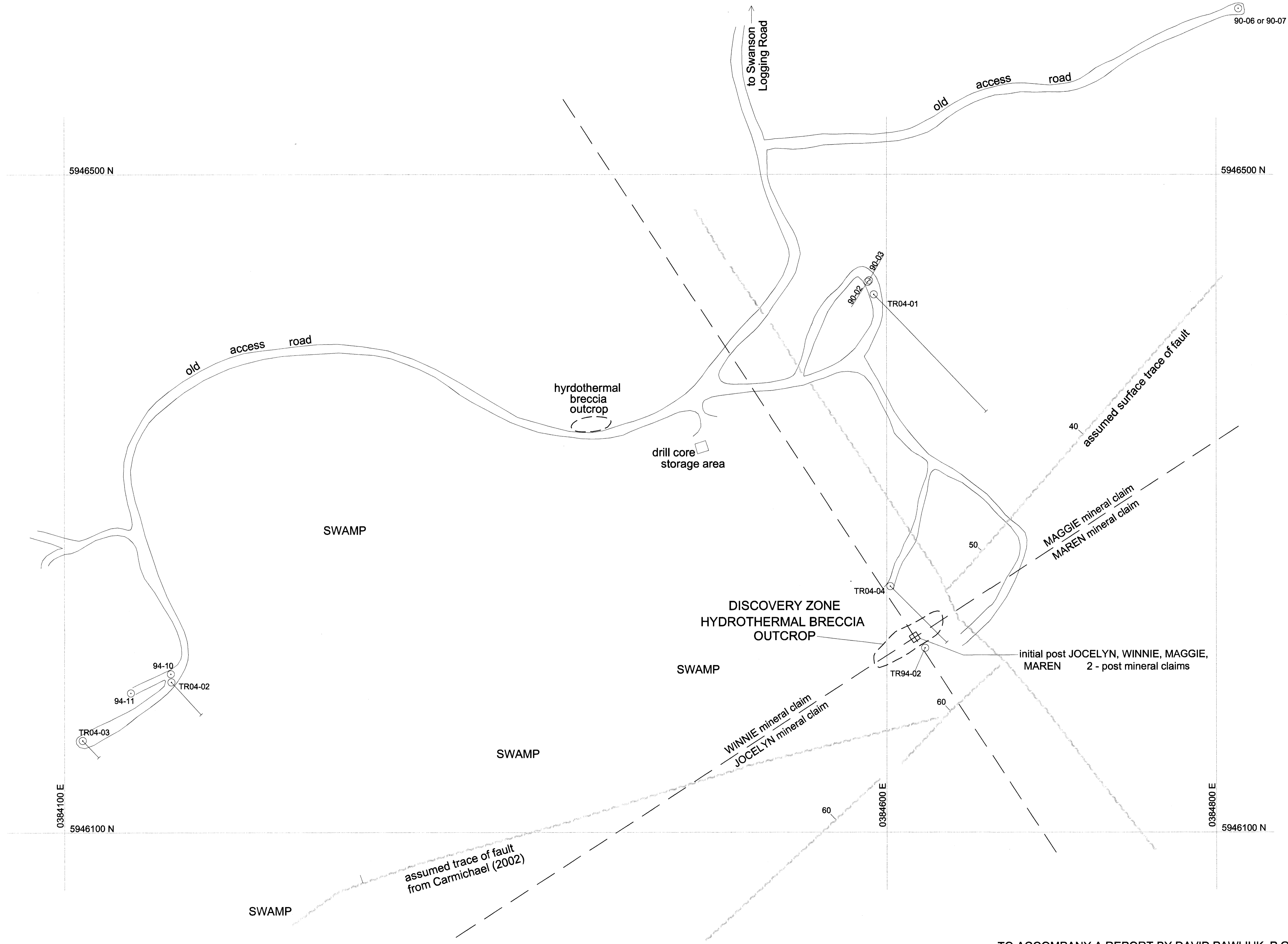
Type	From	To	Description
Major	0.00	20.73	OVERBURDEN; hole abandoned @ 20.73 m depth because of poor ground conditions. Some andesitic conglomerate rubble recovered from bottom of hole.
Point	20.73		EOH



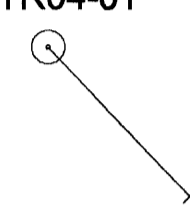
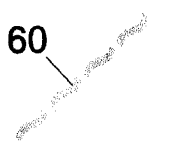
Hole: TR-04-04                      Started: April 13, 2004  
 Az: 135 (collar)                      Completed: April 16, 2004  
 Dip: -62.5 (collar)                      Logged: April 2004  
 Dip: 61.5 @ 104.85m                      Logged by: D. Pawliuk  
 Core size: BTW                      Length: 106.68m  
 Purpose: Test Discovery Zone below hole TR85-01

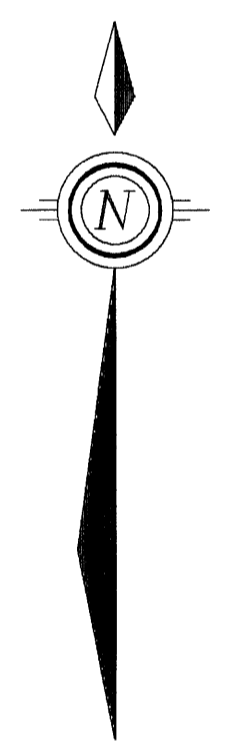
Type	From	To	Description
Major	0.00	7.62	CASING
Major	7.62	26.21	OVERBURDEN; pebbles composed of variety of rock types in medium grained sand. Poor recovery. Difficult drilling conditions.
Major	26.21	104.85	ANDESITE; medium to light grayish green to locally maroon, somewhat porphyritic, non-magnetic rock. 0.5% grayish white calcite as irregular veinlets. Rock soft, crushed clay altered throughout. Probable wide fault shear @ ~50 - 60° to core axis. Traces disseminated pyrite grains. Weak to locally moderate chlorite-altered rock.
Point	31.39		CAVE; approximately 2.7 m interval of rounded re-drilled pebbles of various rock types likely recovered after a bit change.
Minor	38.60	42.22	ANDESITE CONGLOMERATE (?); healed fragmental with say 30% coarse subangular clasts to 6 cm across within fine grained matrix.
Point	42.00		weakly magnetic andesite across few centimeters.
Point	45.81		CALCITE VEIN; 2 cm wide @ 60°; no sulfides seen.
Point	54.13		wavy compositional (shear?) banding @ 45°.
Minor	58.37	58.56	FAULT; maroon-brown silty gouge and finely crushed core; cannot determine orientation.
Minor	60.35	60.69	FAULT; as above.
Minor	67.41	68.62	3% grayish white calcite veinlets mostly @ ~70° to core axis.
Point	67.41		FAULT; 5 cm sandy gouge and finely crushed core along fracture @ 56°.
Sample	73.00	74.00	11563
Point	73.36		bladed calcite (50%)-watery pale gray quartz (50%) vein 5 cm wide @ 60° contains trace, very fine disseminated pyrite.
Point	75.16		calcite vein 12 cm wide @ 32°.
Minor	80.00	80.72	moderately brecciated healed by 10% vein calcite early pale gray quartz veinlets (2%) have been brecciated; quartz breccia fragments within vein calcite matrix. Fault marked by 3 mm sandy gouge on fracture @ 33° @ bottom of interval. Traces finely disseminated pyrite.
Sample	80.00	81.00	11565
Sample	87.10	89.10	11566
Sample	87.10	89.10	11567 (dupe of 11566)

Type	From	To	Description
Point	87.36		pale gray, faintly banded quartz (90%)-calcite (10%) vein 4 cm wide @ 50° contains traces pyrite as blebs up to 1 mm across.
Sample	89.10	91.10	11568
Point	89.95		grayish white quartz (95%)-calcite (5%) vein 2 cm wide @ 50° contains rare traces disseminated pyrite blebs along margins.
Minor	90.96	93.32	moderately brecciated; healed by 3% calcite veinlets and 1% quartz veinlets; degree of brecciation increasing with depth.
Sample	91.10	92.10	11569
Sample	92.10	93.10	11570
Point	92.88		pale gray to off-white calcite (70%)-quartz (30%) banded vein 2.5 cm wide @ 20° contains rare traces disseminated pyrite. 2% pyrite irregular masses within the adjacent sheared andesite? wall rock.
Sample	93.10	95.10	11571
Minor	93.32	95.50	FAULT ZONE; moderately to finely broken core and sandy gouge. Say 4% vein quartz; veins up to 18 mm wide. Fault oriented @ ~60° to core axis. 1% disseminated pyrite, subhedral grains within gouge.
Sample	95.10	97.10	11572
Minor	96.06	96.62	FAULT; sandy, chloritic gouge and finely crushed core. Fault oriented @ ~60°.
Minor	96.62	100.86	moderately to weakly brecciated; 3% calcite veinlets; 1% wormy pale gray quartz veinlets up to 10 mm wide.
Sample	97.10	99.10	11573
Sample	99.10	101.10	11574
Minor	100.86	102.79	FAULT ZONE; interval 60% sand and silt size light greenish, chloritic gouge, 40% milled, subrounded rock fragments of which say 5% are pale gray-brown vein quartz. Cannot determine orientation of fault zone.
Sample	101.10	103.10	11575
Minor	102.79	106.68	weakly brecciated ANDESITE PORPHYRY healed by 1-2% grayish white calcite veinlets. Few faults within interval marked by crushed, milled rock fragments within greenish chloritic sandy gouge; these faults up to 10 cm wide.
Point	106.68		EOH
Sample (blank)			11564

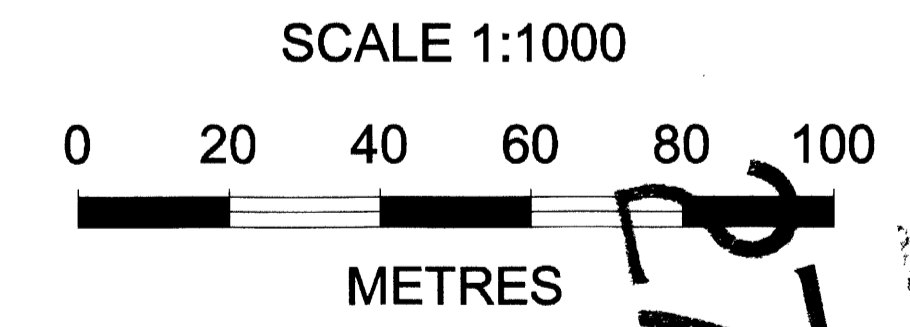


**SYMBOLS**

- 
 TR04-01 Diamond drill hole collar, surface projection; hole identifier.
- Note: numerous earlier diamond drill collars not shown.
- 
 60 Interpreted fault; dip indicated



*David Pawliuk*  
 June 28, 2004



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**TROUT PROPERTY  
 DIAMOND DRILLING  
 PLAN MAP**

SCALE: 1:1000	NTS: 93F/10	FIG. 4
DRAWN BY: D. PAWLIUK	DATE: May 2004	

TO ACCOMPANY A REPORT BY DAVID PAWLIUK, P.GEO

NW

SE

DDH TR-04-01

Az. 137°

GROUND SURFACE

OVERBURDEN

andesitic conglomerate

andesite porphyry

andesitic conglomerate

0.11 g/t Au, 0.1 g/t Ag  
2.0 m

106.59 - 108.55  
major fault zone

rhyolite  
lapilli  
tuff

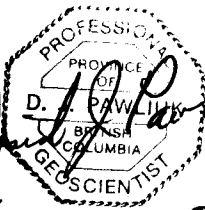
andesite porphyry

142.65 m

SCALE 1:1000

0 10 20 30 40 50

METRES

  
*David J. Pawliuk*  
 June 28, 2004

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TROUT PROJECT  
CROSS SECTION  
DDH TR-04-01

LOOKING NORTHEAST

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SCALE: 1:1000	NTS:	FIG.
DRAWN BY: D. PAWLIUK	DATE: May 2004	5

NW

SE

DDH TR-04-02

Az. 137°

andesite porphyry

beaver pond

OVERBURDEN

andesite conglomerate/lapilli tuff

40.45 m

fault zone;  
broken and ground core,  
poor core recovery

interpreted  
target zone

SCALE 1:1000

0 10 20 30 40 50



METRES

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SCIENTIST  
June 28, 2004

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**TROUT PROJECT  
CROSS SECTION  
DDH TR-04-02**

**LOOKING NORTHEAST**

SCALE: 1:1000	NTS:	FIG. 6
DRAWN BY: D. PAWLIUK	DATE: May 2004	

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NW

SE

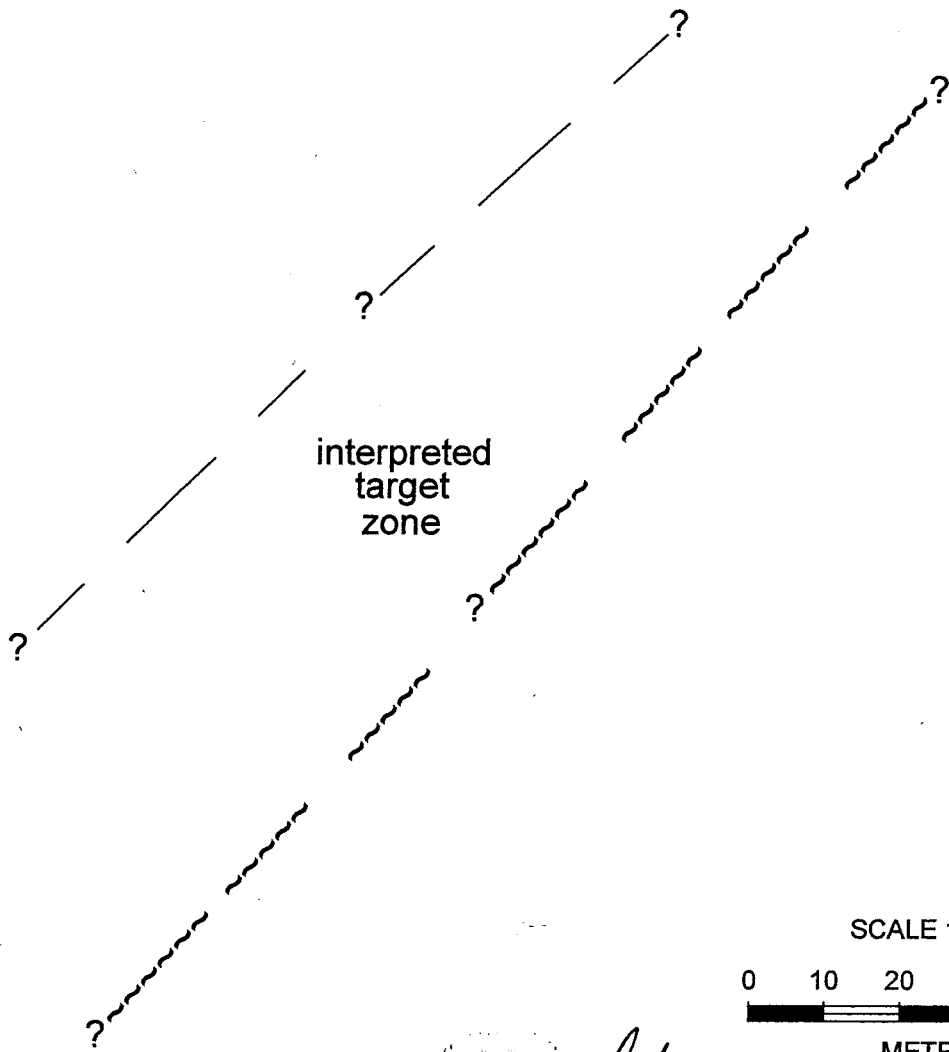
DDH TR-04-03

Az. 137°

GROUND SURFACE

OVERBURDEN

andesitic conglomerate rubble  
20.73 m



SCALE 1:1000

0 10 20 30 40 50



METRES

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TROUT PROJECT  
CROSS SECTION  
DDH TR-04-03

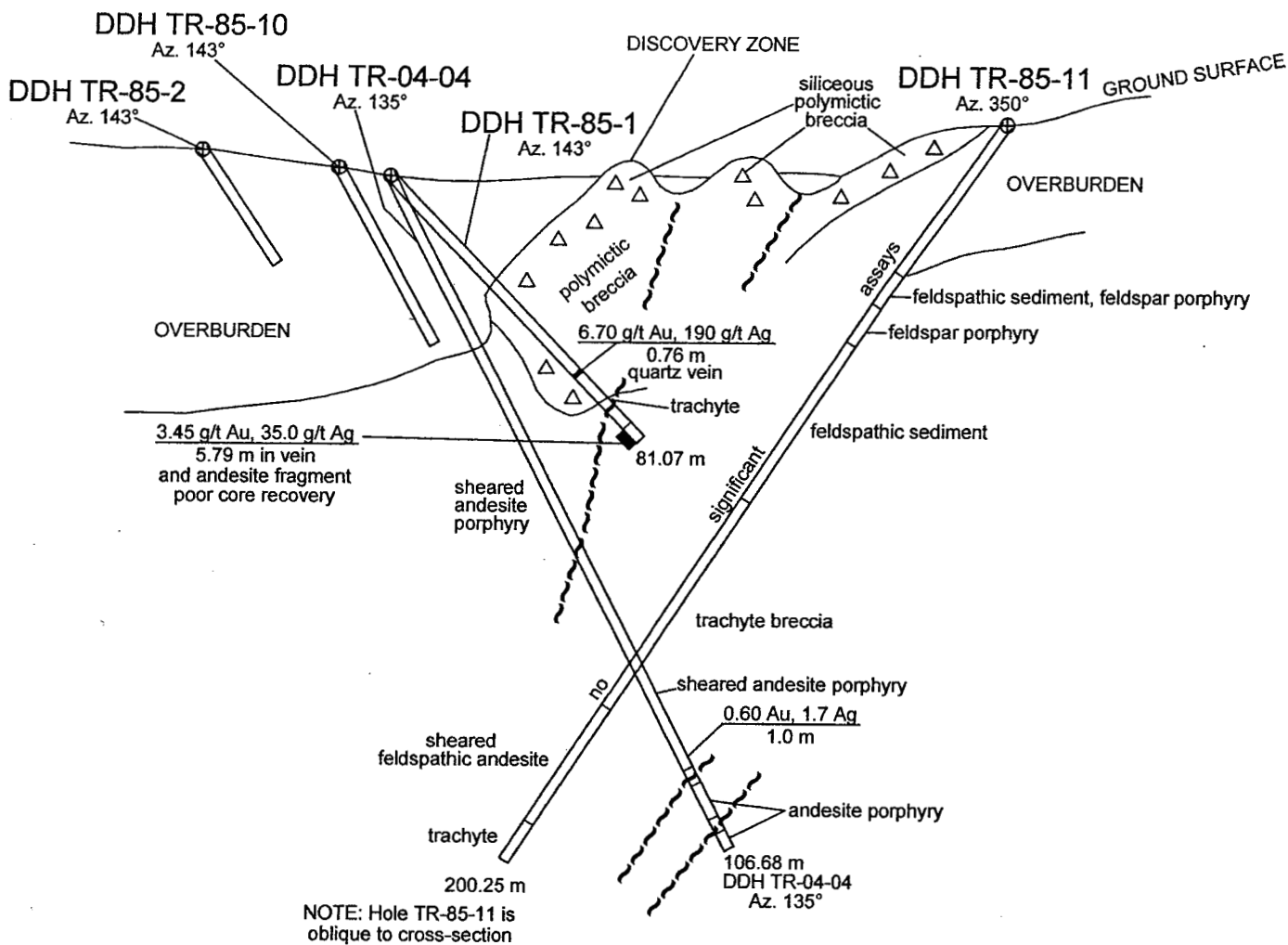
LOOKING NORTHEAST

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SCALE: 1:1000	NTS:	FIG. 7
DRAWN BY: D. PAWLIUK	DATE: May 2004	

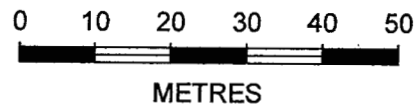
NW

SE



NOTE: drawing modified after  
Potter (1985) Figure 10.

SCALE 1:1000



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June 28, 2004

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**TROUT PROJECT  
CROSS SECTION  
DDH TR-04-04,  
TR-85-1, -2, -10, -11  
LOOKING NORTHEAST**

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SCALE: 1:1000	NTS:	FIG.
DRAWN BY: D. PAWLIUK	DATE: May 2004	8