ASSESSMENT REPORT

on the

1992 DIAMOND DRILLING PROGRAM

WOLF 92 GROUP

OMINECA MINING DIVISION

NTS: 93F/3W

Lat.: 50°25'N **Long.:** 124°53'W

Owner and Operator

Minnova Inc.
3-311 Water Street.
Vancouver, B.C.
V6B 1B8

Dave Heberlein
March, 1993

TABLE OF CONTENTS

LIST OF FIGURES **After Page**

LIST OF TABLES

1. INTRODUCTION

1.1 General:

This report documents the results of a 15 hole, 2,002m diamond drilling program carried out on the Wolf property between August 12 and September 23, 1992. The program was designed to test zones of strong silicification and epithermal-style gold mineralization exposed in trenches at the Ridge Zone and areas of anomalously high resistivity located about 1,000m west of the Ridge Zone.

1.2 Property Location and Access:

The Wolf claims are located on the Nechako Plateau at latitude 53° 12' N and longitude 125° 27' W (Fig.1). Closest towns are Vanderhoof, approximately 130km northeast and Prince George, 230km east northeast.

The claims are accessable by road for about seven months of the year via the Kluskas-Malaput and Kluskas Forest Service Roads. Travel time from Vanderhoof averages about 2½ depending on logging traffic. In winter months the only access is by helicopter from Prince George or Vanderhoof. Flying time which are approximately one hour flying time away.

1.3 Topography and Vegetation:

The claims cover part of the Entiako Spur; a westerly trending branch of the Fawnie Range. This feature consists of gently rolling hills with locally, moderately steep slopes. In the claim area, the range of hills consists of a series of resistant knobs or topographic domes separated by swampy lowlands. Relief is approximately 250m in the claim area with valley floors at an elevation of 1,040m and hill tops at just under 1,300m

With the exception of the swampy valley floors, the claim area is heavily forested. Lodge Pole pine is the dominant species, but stands of white spruce and balsam occur locally. Much of the forest is immature, growing over a 30 to 40 year old burn.

Outcrop is sparse over much of the property. Most occurs on the tops of the hills and on south facing slopes. Overburden consists of basal till in the east and south east claim area, which is overlain by poorly stratified outwash deposits. Fluvial deposits consisting of sands and gravels occur in the northwest part of the property towards the Entiako drainage.

1.4 Property and Ownership:

The Wolf property consists of thirteen MGS mineral claims, totalling 198 units. They are owned and operated by Minnova Inc.

TABLE 1. LIST OF CLAIMS

CLAIM	RECORD NO.	UNITS	EXPIRY DATE
WOLF	238648	20	07/18/2002
WOLF 2	238649	9	07/18/2002
WOLF 3	238650	12	07/18/2001
WOLF 5	238895	20	09/26/1995
WOLF 6	238896	8	09/26/1995
WOLF 7	238897	15	09/26/1995
WOLF 8	238898	12	09/26/1995
WOLF 9	238899	20	09/26/1994
WOLF 10	238900	20	09/26/1995
WOLF 11	312994	20	09/07/2000
WOLF 12	312995	16	09/07/2000
WOLF 13	312996	16	09/04/1999
WOLF 14	312997	10	09/05/1999
		198 units	

1.5 Exploration History:

1982 Epithermal mineralization discovered by Rio Algom by prospecting around a regional lake sediment anomaly. Epithermal style mineralization identified at the Ridge Zone

1982 to 1984 Rio Algom explored the property with a program of geological mapping, hand trenching, soil sampling, rock sampling, VLF-EM and magnetometer surveys.

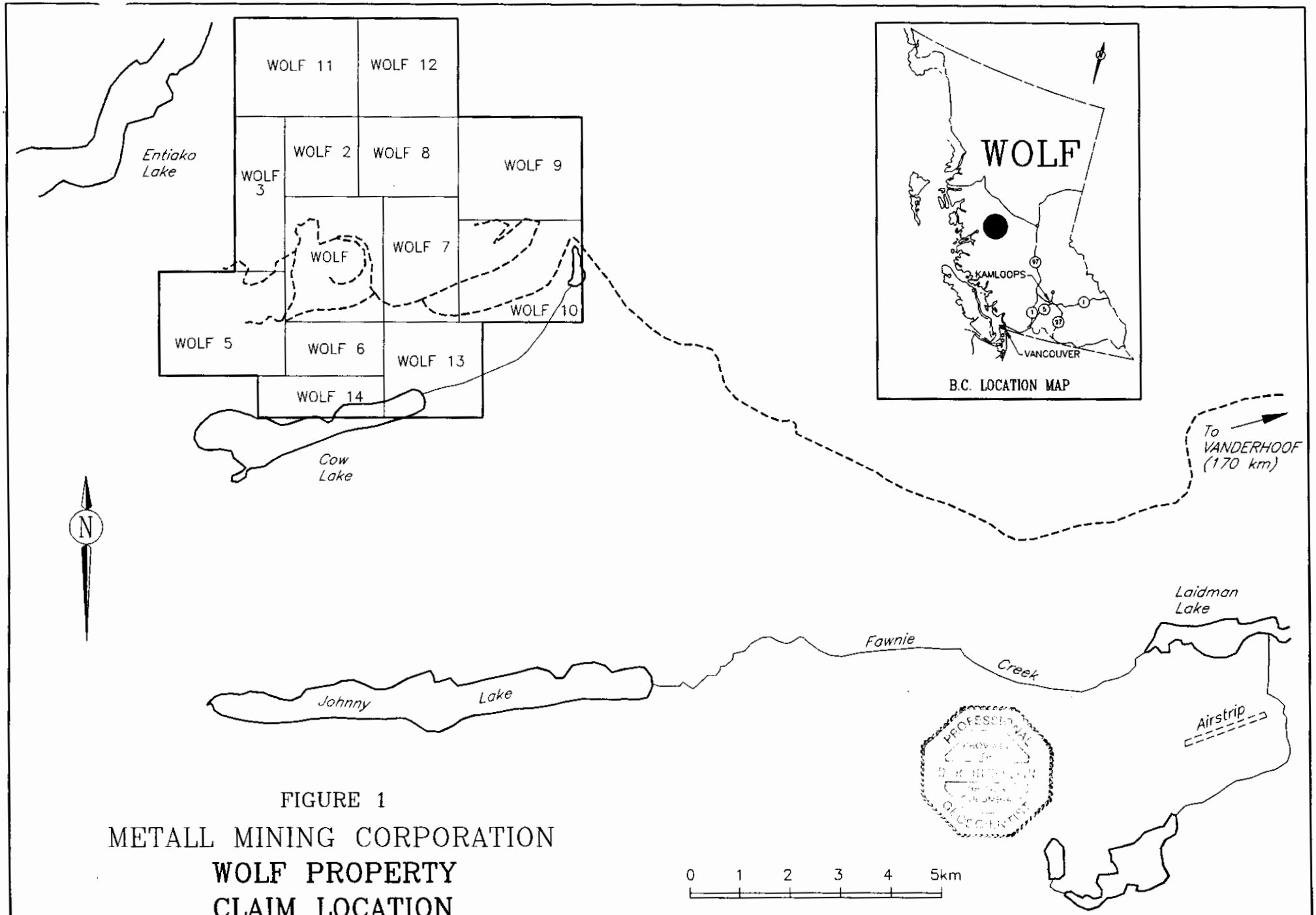


FIGURE 1

METALL MINING CORPORATION

WOLF PROPERTY

CLAIM LOCATION

WOLFCLM

They identified several more zones of epithermal alteration, two of which (the Pond and Ridge Zones), contained encouraging gold values.

1985 Rio Algom carried out a six hole, 593.5m drilling program to test the Ridge and Pond zones. No significant gold mineralization was intersected by the drill holes.

1985 to 1988 Wolf epithermal system was studied by Kathryn Andrew as part of a M.Sc. thesis at UBC.

1986 Lucero Resource Corp. optioned the property from Rio Algom and carried out an extensive programs of trenching, road building, soil sampling and geological mapping between 1986 and 1988.

1989 Lucero Resource Corp. purchased 100% of the property from Rio Algom.

1991 Minnova Inc. optioned the property and flew an airborne magnetic and EM survey over the claim area.

1992 Minnova carried out an extensive program of trenching, gradient array IP, geological mapping and biogeochemical sampling over the Ridge and Pond Zones. This culminated in a fifteen hole, 2,002m diamond drilling program that resulted in the discovery of a shallow dipping mineralized zone.

1.6 Geology:

The Wolf property is underlain by volcanic rocks and sediments of Eocene and Upper Jurassic age. The older rocks comprise the basement in the area. They consist of augite porphyritic andesite flows with locally abundant epiclastic sediments. Best exposures are in road cuts along the eastern property boundary and in a trench in the south-central claim area.

Eocene rocks lie unconformably on the Jurassic volcanics and form the prominent hills of the Entiako Spur. The sequence consists of a lower assemblage of heterolithic breccias and conglomerates containing clasts of basement rock (andesite and monzonite). This grades up into a mixed package of coarse heterolithic sandstones, wackes and rhyolitic tuffs. Rhyolite flows, breccias and pyroclastics (some welded) form the upper part of the sequence. The rhyolites are strongly quartz phyric and exhibit flow banding and devitrification textures. Potassium-argon age dates of the rhyolites place them between 47 and 49 Ma. (Andrew, 1988) which makes them part of the Ootsa Lake Group as defined by Tipper (1963).

Extensive block faulting occurs throughout the property area. Dominant faults sets strike north and northeast and have offsets of generally less than 50m. Bedding in the Eocene units dips

shallowly to moderately (20 to 40°) to the west. Steeper dips, also to the west (60 to 90°) are seen in the basement rocks.

Mineralization is hosted exclusively in the Eocene rocks. Favorable hosts are rhyolite fragmentals and tuffaceous sediments that occur in the sequence. It is characterized by complex zones of hydrothermal brecciation, banded veins and chalcedonic stockworking. The zones lie in a broader envelope of strong silicification Gold values occur primarily in the banded veins and hydrothermal breccias where grades up to 78g/t have been recorded over narrow intervals. Average grades are much lower. At the Ridge Zone the mineralized zone averages about 2 g/T Au.

2. DIAMOND DRILLING

2.1General:

Fifteen diamond drill holes totaling 2,002m were drilled on the Wolf property between August 14 and September 14, 1992. Drilling was carried out by Atlas Drilling Ltd. of Kamloops B.C., using a skid-mounted, Longyear Super 38 drill and NQ rods. Core was logged by Cam Clayton and Dave Heberlein at Minnova's camp located at the eastern property boundary. The core was routinely split and sampled at two metre intervals, or less if dictated by the geology. Samples were shipped to Minen Labs of North Vancouver where they were pulverized and digested using aqua regia. Silver, As, Ba, Cu, Pb, Sb and Zn were determined by ICP. Gold was analyzed by fire assay with an AA finish and Hg was analyzed by cold vapor AAS. The results of the geochemical analyses and drill logs are presented in Appendix A. Drill hole information is summarized in Table 2.

TABLE 2. DRILL HOLE INFORMATION

HOLE	NORTHING	EASTING	ELEVATION	AZM	DIP	DEPTH
WF92-07	97414N	36327E	1,255m	095°	-49°	97.2m
WF92-08	97400N	36185E	1,258m	090°	-55°	160.3m
WF92-09	97300N	36185E	1,274m	090°	-50°	155.45m
WF92-10	97400N	36200E	1,262m	090°	-55°	105.5m
WF92-11	97900N	36150E	1,194m	270°	-50°	135.6m
WF92-12	98100N	36025E	1,190m	090°	-60°	132.9m
WF92-13	97300N	36110E	1,260m	090°	-60°	190.5m
WF92-14	98200N	35250E	1,159m	090°	-45°	139.0m
WF92-15	97900N	35235E	1,181m	090°	-60°	124.4m
WF92-16	97700N	35300E	1,183m	090°	-45°	125.0m
WF92-17	97600N	35330E	1,160m	090°	-45°	124.1m
WF92-18	97400N	36085E	1,270m	090°	-60°	148.1m
WF92-19	97500N	36220E	1,271m	090°	-55°	125.0m
WF92-20	97600N	36150E	1,248m	090°	-50°	100.0m
WF92-21	96900N	36400E	1,293m	090°	-60°	149.4m

2.2 Results:

A brief description of the results of each drill hole is presented below.

DDH WF-92-07

This hole was drilled to test a zone of gold mineralized hydrothermal breccia exposed in trenches at the Ridge Zone. It collared in a purple quartz feldspar porphyry intrusion that persists to a depth of 12.2m. From 12.2 to 22.6m the hole penetrated a section of flow banded, quartz, feldspar porphyritic rhyolite containing zones of quartz stockworking and hydrothermal breccia (17.8 to 21.4m). A more intense silicified and brecciated zone occurs below the flow banded rhyolite between 22.6 and 25.0m.

The hydrothermal breccia is characterized by angular to rounded clasts of flow banded rhyolite and epiclastic sediment in a matrix of translucent, banded chalcedony. Clasts of vein material, some showing blading textures are also present.

A second interval of flow banded rhyolite occurs from 25.0 to 38.1m. The rock changes from fairly massive rhyolite to autoclastic breccia with depth. Numerous quartz veinlets with 1 to 2cm envelopes of pervasive silicification cut the rhyolite. Some of the veinlets show delicate banding textures. The rhyolite is argillically altered below 36.3m. and silicification diminishes gradually to the bottom of the interval.

Volcaniclastic sediments consisting of laminated siltstones and mudstones occur between 38.1 and 44.4m. This interval is bounded by faults at its upper and lower contact. Grain size generally coarsens down section. The finer grained beds near the top are pervasively silicified stockworked with quartz veinlets.

A fine grained quartz phyric rhyolite occurs below the sediments from 44.4 to the end of the hole at 86.5m. Moderate to strong silicification consisting of quartz stockworking and jigsaw brecciation (hydrofracturing) occur in the top 20m of the unit. Lower down, silicification gives way to moderate to strong pervasive argillic alteration that coincides with an increasing pyrite content (to 2%).

Anomalous gold values occur at several levels in the hole, but no ore grades were encountered over significant widths. Highest values (5.05 g/t, 2.10 g/t) correspond with most intense zones of silicification. Anomalous values (> 100 ppb) occur throughout the hole.

DDH WK-92-08

This hole, collared 115m due west of WF-92-07, was drilled to test the zone of anomalous gold values intersected in that hole. For the top 80.3m, it intersected a homogeneous section of quartz feldspar porphyry rhyolite intrusive. This unit is variably silicified throughout with zones of quartz stockworking and pervasive silicification present at several levels. The overall intensity of silicification increases to the lower contact where it is massive and texturally destructive and grades into a complex zone of hydrothermal breccia and stockworking.

The breccia and stockwork zone occurs between 80.3 and 95.2m. It is highly variable in texture, ranging from massive to bladed (carbonate replacement) veins, banded chalcedony stockworks to hydrothermal breccia. The host rock, although strongly altered, is identifiable as a quartz phyric rhyolite. Fragments of silicified epiclastic sedimentary rock occur lower in the zone. From 95.2 to 98.0m, the hole intersects a moderately silicified and stockworked quartz phyric rhyolite.

Epiclastic sediments occur below the rhyolite from 98.0 to 110.8m. They consist of finely interbedded pyritic siltstones, and feldspathic sandstones. Weak zones of quartz microveining cut the sediments. These contain narrow pyritic stringers. At 110.8m there is a sharp contact with a densely microcrystalline quartz phyric rhyolite. This unit is weakly clay altered.

A second epiclastic sedimentary unit underlies the rhyolite between 126.0 and 128.5m. It consists of a medium to coarse grained lithic sandstones containing angular to sub-rounded clasts of sandstone, mudstone and rare andesite in a silty matrix. The unit coarsens down hole and grades into an interlayered sequence of heterolithic breccias and crystal tuffs that persist to the end of the hole at 160.3m.

Gold mineralization occurs from 87.6m to 98.0m. Here, values exceed 1 g/t and reach a maximum of 7.28 g/t. Maximum concentrations correspond with bladed quartz veins.

DDH WF-92-09

Drill hole WF-92-09 was collared 100m south of WF-92-08 to test the same mineralized zone. It collared in a purple coloured quartz feldspar porphyry containing variable zones of silicification and quartz stockworking. Significant silicified zones occur from 33.0 to 37.7m and 93.8 to111.0m. These zones consist of stockworks of bladed quartz stringers with narrow cross cutting breccia veins up to 40cm wide. The veins have well developed silicified envelopes that overlap in places to produce zones of massive silicification.

At 134.0m the quartz feldspar porphyry is disrupted by a complex hydrothermal breccia zone consisting of silicified porphyry, rhyolite and siltstone fragments in a banded silica (+adularia ?) matrix. This zone is truncated by a fault from 136.0m to 139.1m.

Epiclastic sediments occur below the fault from 151.2 to the end of the hole at 155.45m. In the upper part of the interval they consist of laminated siltstones with clasts of rhyolite and sandstone. Lower in the section they grade into lithic sandstones and heterolithic conglomerates. The latter unit consists of a poorly sorted, matrix supported breccia with sub-rounded fragments of rhyolite, siltstone, andesite and rare monzonite clasts.

Gold values are weak throughout the hole with the exception of the hydrothermal breccia unit between 134.0 and 136.0m. This interval returned an assay of 1.3g/t Au. Above the hydrothermal breccia, values are weakly anomalous ranging between 26 and 298 ppb.

DDH WF-92-10

Collared between holes WF-92-7 and WF-92-8, this hole was drilled to test the continuity of the of the anomalous gold zone intersected in those holes. It collared in variably silicified quartz feldspar porphyry that extends to a depth of 27.9m. Rhyolite occurs below the porphyry from 27.9 to 30.3m. This unit consists mostly of flow material characterized by strong flow banding textures. Fragmental sections of the

interval (e.g. from 30.3 to 39.6m) may represent autoclastic breccias or lapilli tuff interbeds.

Tuffaceous rocks underlie the rhyolite. They are present from 39.6 to 53.4m. Lapilli tuffs and bedded rhyolite breccias characterize this unit. The tuffs are composed mainly of angular spherulitic and flow banded rhyolite lapilli (up to 20mm in diameter) in a fine grained crystal and vitric ash matrix. The tuffs grade downwards into an autoclastic rhyolite breccia composed of block size clasts of spherulitic, flow banded rhyolite. Interbedded lapilli tuffs and rhyolite breccias persist to a depth of 70.2m. In this interval they become progressively more silicified towards the base and quartz stockworking with bladed and breccia veins become abundant. At 70.2m the hole penetrates a strongly silicified and stockworked zone containing numerous banded (quartz-adularia) and bladed veins with zones of hydrothermal breccia. This continues to a depth of 88.0m.

From 88.0m to 95.9m more quartz phyric rhyolite occurs. This unit is faulted against a heterolithic breccia consisting of monzonite, andesite, siltstone and rhyolite fragments, at a depth of 98.3m.

Highly anomalous gold values occur in the hydrothermal breccia zone between 83.8 and 94.6m. Here values range from 0.58 g/t to 12.7 g/t Au with an average of 2.12 g/t. Again the highest concentrations correlate with bladed veins and hydrothermal breccia intervals.

DDH WF-92-11

DDH WF-92-11 was drilled to test a coincident chargeability and resistivity anomaly located 600m north of the Ridge Zone. It collared in a quartz crystal ash tuff that extends to a depth of 13.5m. At 13.5m it is in sharp contact with a heterolithic breccia. The breccia consists of angular to sub-rounded clasts of andesite, rhyolite and mudstone in a lithic, feldspathic tuffaceous matrix. Patchy silicification consisting of quartz stockworking with banded, bladed and breccia veinlets occurs sporadically in the breccia.

At 25.5m the hole enters and remains in a thick sequence of rhyolite lapilli tuffs. They are characterized by lapilli size clasts of glassy, flow banded rhyolite and

pumice in a vitric matrix composed of glassy shards, crystal and pumice fragments. Fiammé are abundant throughout the unit. Near the bottom of the hole at 135.6m incipient welding textures also occur.

No significant alteration or gold mineralization is present in this hole.

DDH WF-92-12

This hole was drilled to test a coincident chargeability and resistivity anomaly 200m north of WF-92-11. Crystal and crystal lithic tuffs, similar to those present in WF-92-11 occur to a depth of 54.2m.The tuffs consist of broken feldspar crystals and lithic lapilli in a dark grey vitric ash matrix. Interbedded tuffs and volcaniclastic sediments continue to 76.8m.

Below 76.8m, the hole penetrates a welded ash flow tuff to a depth of 132.9m. This unit contains abundant crystal fragments, lithic lapilli and pumice clasts in a variably welded vitric matrix. Densely welded intervals display excellent eutaxitic textures.

Alteration throughout the hole is weak, consisting mainly of pervasive sericitization and patchy silicification defined by sparse quartz veinlets. Intervals of clay veining (kaolinite?) are also present, indicating weak argillic alteration. No gold mineralization occurs in this hole.

DDH WF-92-13

This hole was drilled at the Ridge Zone, 100m south of WF-92-08. The principal target was the zone of gold-bearing hydrothermal brecciation found in holes WK-92-7, 8, 9 and 10.

It collared in a massive quartz, feldspar porphyry intrusion which persists to a depth of 80.2m. This unit is variably altered throughout, with silicification increasing towards the lower contact.

Rhyolite lapilli tuff occurs from 98.2 to 101.0m. It is truncated by a fault zone from 101.2 to 102.4m. Heterolithic breccia consisting of sub-angular clasts up to block

size in a medium grained sandy or tuffaceous matrix occurs to 135.4m. Clasts consist of epiclastic sediment (siltstone and mudstone), quartz feldspar porphyry and andesite. Silicification persists throughout this unit with banded and bladed quartz stockworks present from 141.0 to 151.4m. At 151.4m stockworking gives way to a zone of intense silicification and hydrothermal brecciation. This zone contains abundant banded veins and clasts of banded vein material. Open spaces in the strongly silicified parts of the interval are filled with bladed silica. Bladed veins vary from about 1cm to over 30cm.

The strongly altered zone is separated from less altered tuffaceous sandstones by a gougy fault between 160.3 and 161.3m. These sediments occur at the top of a downwards coarsening sequence of interbedded crystal and vitric tuffs that grade into graded sequence of lithic lapilli tuffs and sandstones. At the base of the tuff sequence at 183.1m, there is a second heterolithic breccia unit. This one persists to the end of the hole at 190.5m. It is characterized by abundant rounded monzonite clasts.

Gold mineralization occurs over a 17.1m interval in this hole from 142.7 to 159.8m. In this interval values range from 0.66 g/t to 6.51 g/t with an average (weighted) grade of 1.53 g/t Au. Mineralization occurs in the zone of intense silicification, hydrothermal brecciation and stockworking at the base of the upper heterolithic breccia.

DDH WF-92-14

This hole was drilled to test a coincident resistivity and chargeability north of the Chopper Pad Zone (Fig. 2). It penetrated a thick section of spherulitic, flow banded, quartz feldspar porphyritic rhyolite that extends to the end of the hole at 139.0m. Three basic dykes occur near the top of the hole from 6.1 to 8.3m, 25.0 to 27.m and 30.9 to31.7m.

Weak alteration occurs throughout the hole. It is characterized by patchy clay alteration, silicification and quartz stockworking. No significant gold values occur in these zones.

DDH WF-92-15

A similar sequence of flow banded rhyolites to that in WF-92-14 was intersected in hole WF-92-15. This hole tested the same resistivity anomaly 300m to the south.

From 1.5 to 13.9m, the hole cored a rhyolite lapilli tuff containing abundant rounded quartz feldspar porphyry rhyolite lapilli in a fine grained ashy matrix. Quartz veins and jigsaw breccias occur throughout this interval. Flow banded rhyolites and autoclastic rhyolite breccias occur from 13.9 to 81.9m. Variable silicification is present in the rhyolites. It occurs as banded and bladed quartz stockworks and pervasive replacement of the groundmass. Strongest silicification occurs between 42.1 and 52.6m.

Lapilli tuffs consisting of rounded rhyolite lapilli in a vitric ash matrix underlie the flow banded rhyolite from 81.8 to 109.0. Welded and incipiently welded sections are noted. Silicification continues through the lapilli tuff. with intense quartz stockworking noted from 91.8 to 92.1 and less intense stockworking from 92.1 to 97.8m.

More flow banded rhyolite occurs below the lapilli tuff from 109.0 to 124.4m. This unit is extremely spherulitic compared to the rhyolite higher in the hole. No significant alteration occurs in this unit.

Anomalous gold values (> 100 ppb) occur sporadically throughout the hole. Best values occur from 9.4 to 10.0m (392 -ppb), 19.2 to 19.9m (369 ppb), 24.9 to 25.2m (404 ppb) and 68.1 to 77.0m (109 to 719 ppb).

DDH WF-92-16

WF-92-16 was drilled 200m south of WF-92-15 on the Black Fly Zone. Flow banded rhyolite and rhyolite breccias were intersected from 0.0 to 87.9m. Alteration is variable throughout this interval. Moderate silicification and quartz stockworking occurs between 32.0 to 50.1m and 55.2 to 69.9m.

A crystal ash tuff from 69.9 to 102.7m separates the rhyolite from a lower rhyolite unit. The tuff consists of a well banded vitric ash with abundant fiammé and rare crystal fragments. It is strongly clay altered throughout with traces of chlorite.

The lower rhyolite consists mainly of autoclastic breccia mixed with spherulitic flow banded rhyolite. Unlike the upper unit this rhyolite is only slightly altered.

Anomalous gold values (> 100 ppb) occur throughout the hole. The best mineralization occurs from 14.3 to 43.6m and 63.3 to 79.4m. These intervals correspond to the most silicified zones.

DDH WF-92-17

This hole was drilled 100m south of WF-92-16 on a coincident resistivity and chargeability anomaly on the Black Fly Zone Trend.

From 9.3m (bottom of casing) to the end of the hole at 124.1m, the hole cut a sequence of massive, flow banded, spherulitic and autobrecciated rhyolite. As in WF-92-16, stockworks of quartz occur sporadically throughout the hole, however in this hole pyrite stringers accompany the silicification. Strong alteration is present from 71.9 to 75.8m, 92.9 to 101.6m and 105.0 to 124.1m. These intervals consist of quartz stockworked and pervasively silicified and locally argillized rhyolite. Stockwork veins are frequently banded and bladed. Pyrite stringers occur in the more clay altered zones.

Anomalous gold values (> 100ppb) occur throughout much of the hole with highly anomalous values (> 300 ppb) occurring from 38.3 to 59.6 (305 to 1426 ppb). This interval also contains the highest pyrite concentrations noted in the hole (> 2%).

In addition to anomalous gold values, elevated As, Hg and Sb concentrations were detected. These correlate well with the zone of highest gold concentrations. A lower zone of elevated Hg values (> 200 ppb) occurs from 96.4 to 110.9m. In this interval gold values are only weakly anomalous.

DDH WF-92-18

Hole WF-92-18 was drilled on the Ridge Zone 65m west of WF-92-08. It was drilled to determine the down dip extent of the mineralization intersected by holes WF-92-07, 08, 09, 10 and 13.

As with the other Ridge Zone holes, WF-92-18 collared in a quartz feldspar porphyry intrusion. This unit continues to a depth of 83.6m where there is a sharp contact with a heterolithic breccia. Alteration within the intrusion is weaker than in the other holes in this area. It consists of narrow zones of patchy silicification and quartz stockworking separated by relatively wide areas of fresh rock.

Heterolithic breccia is a poorly sorted, matrix supported fragmental rock with sub-angular to rounded clasts of rhyolite, andesite and volcaniclastic sediment. This unit is chloritized with no obvious silicification. The breccia grades downwards into a sequence of vitric ashes and siltstones from 108.2 to 131.9. These are unaltered.

Epiclastic sediments, principally laminated siltstones occur below the tuffs. They coarsen downwards into a second heterolithic breccia that extends to the end of the hole at 148.1m.

Strong alteration occurs at several locations in the hole. A hydrothermal breccia and silicified zone occurs between 104.6 and 108.2m. This interval closely resembles the mineralized zones in holes Wf-92-08 and 10. It is characterized by massive, banded and bladed silica overprinted by a stockwork of clear drusy quartz veins. Clasts of wall rock occur in hydrothermal breccia zones within the silicified interval. These clasts are completely replaced by silica. Lower in the hole, a strong stockwork of banded and bladed veinlets occurs between 137.6 and 139.7m. Narrow hydrothermal breccia zones occur in this interval.

Gold mineralization occurs in and adjacent to the strong silicified zone between 104.6 and 108.2m. Values range from 235 ppb to 2260 ppb with a weighted average of 988 ppb over a width of 6.1m.

DDH WF-92-19

DDH WF-92-19 was drilled 100m north of WF-92-08 to test the northerly continuation of the Ridge Zone mineralization. From 3.4 to 34.7mthe hole penetrated the quartz feldspar porphyry intrusion. Zones of moderate silicification and argillic alteration occur at several places in this unit. Strongest alteration occurs from 9.6 to 24.3m. Here, the porphyry is strongly argillized with patchy silicification.

Rhyolite lapilli tuffs and ash tuffs underlie the porphyry intrusion to a depth of 75.2m. They are characterized by abundant broken quartz and feldspar crystals in a vitric ash matrix. Glass shards are conspicuous in some intervals. Lapilli-rich intervals contain primarily rhyolite porphyry lapilli ranging from 5 to 25mm. Alteration in the tuffs is weaker than in the overlying porphyry. It consists of patchy argillic alteration and chloitization. The latter is concentrated in the glassy ashes. Quartz stockworking occurs from 68.1 to 70.4m.

Hydrothermal brecciation and strong silicification occur between 70.4 and 73.1m. Massive silicification or quartz veining occurs in the core of this interval. This feature has excellent banded, bladed and breccia textures.

Beneath the tuffaceous rocks the hole cored a sequence of volcaniclastic sediments, principally tuffaceous sandstones and siltstones. These occur from 75.2 to 89.1m. In these rocks alteration is restricted to a weak stockwork of limonite stringers and sparse quartz veinlets.

Heterolithic breccia is the lowest unit cored in the hole. It occurs from 89.1 to 125.0m. The breccia closely resembles that at the bottom of WF-92-13. It is characterized by abundant rounded to sub-angular clasts of monzonite ranging in size from 10 to 100mm. Other clasts present include rhyolite, sandstone and pyroxene phyric andesite.

DDH WF-92-20

This hole was drilled 100m north of hole WF-92-19 to test the same mineralized zone. It collared in quartz feldspar porphyry intrusive that becomes progressively more silicified with depth. Strong quartz stockworking occurs from 43.1

to 59.2m. At 59.2m the mineralized zone was intersected. As in the other Ridge Zone holes it consists of a hydrothermal breccia containing angular fragments of strongly silicified mudstone and rhyolite. The matrix consists of massive white, sugary quartz with no banding or blading textures. Bladed stringers do, however, cut the hydrothermal breccia.

Mudstones and siltstones and tuffaceous sandstones underlie the hydrothermal breccia. These continue to 85.9m where they grade into a heterolithic breccia. Alteration of the sediments is very weak.

Heterolithic breccia occurs from 85.9 to the end of the hole at 100.0m. It consists of sub-angular to rounded clasts of monzonite, andesite rhyolite and mudstone in a sandy lithic-rich matrix. Clasts show a preferred orientation or alignment that resembles welding. A feldspar porphyry dyke cuts the heterolithic breccia between 88.4 and 99.6m. The dyke is characterized by 20 to 30% feldspar phenocrysts up to 15mm in diameter. Many of these phenocrysts are strongly zones and twinned. The groundmass is fine grained to aphanitic with about 1% 1mm quartz phenocrysts.

Anomalous gold values (> 100 ppb) occur between 58.2 and 62.9m. In this interval values range from 120 to 333 ppb.

DDH WF-92-21

The final hole drilled in the 1992 program tested a 400m long zone of intense silicification called the Pond Zone.

Moderately to strongly silicified and stockworked quartz feldspar porphyry was intersected from 3.1 to 105.6m. Alteration intensity in this interval is very variable. Strong to intense alteration occurs from 48.8 to 59.4 and from 89.7 to 93.5m.

A fault zone at 105.6m separates the porphyry from a sequence of epiclastic sediments and heterolithic breccias that extend between 106.4 and 146.4m. These rocks are identical to those underlying the rhyolite sequence at the Ridge Zone.

A narrow basalt dyke from 143.3m to 146.4m separates the epiclastic sequence from a densely welded ash flow tuff. This rock is characterized by strong eutaxitic

textures defined by flattened pumice lapilli and glassy matrix material. Rhyolite clasts also flattened and crystal fragments are also abundant in this unit.

Sporadic anomalous gold values occur in the hole, however none occur over continuous intervals. The highest concentration, 1033 ppb occurs in a 20cm wide hydrothermal breccia vein from 65.2 to 65.4m.

3. CONCLUSIONS AND RECOMMENDATIONS

The 1992 diamond drilling program on the Wolf claims successfully identified a significant zone of epithermal style gold mineralization at the Ridge Zone. It consists of a shallow dipping zone of strong silicification, banded veins and hydrothermal breccias localized close to the lower contact of a rhyolite porphyry sill. Gold grades of approximately 2 g/T occur over an area of approximately 300 by 300m (in plan) with an average thickness of about 9m. Significant areas of silicification and anomalous gold values were also identified at the Blackfly Zone (holes WF92-16 and 17). Both areas are considered to be important targets that warrant additional drilling to assess their potential.

4. REFERENCES

Andrew, K.P., 1986: Wolf Epithermal Precious Metal Vein Prospect; B.C.E.M.P.R Paper 1986-1, pp. 317-320.

Andrew, K.P., 1988: Geology and Genesis of the Wolf Precious Metal Epithermal Prospect and the Capoose BAse and Preious Metal Porphyry-Style Prospect, Capoose Lake Area, Central British Columbia; Unpublished M.Sc. Thesis, The University of British Columbia.

Tipper, H.W., 1963: Nechako River Map Area, British Columbia; G.S.C Memoir 324.

APPENDIX A:

DRILL LOGS AND ANALYTICAL RESULTS

HOLE NUMBER: WF-92-07

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: WOLF92
PROJECT NUMBER: 673
CLAIM NUMBER:
LOCATION: RIDGE ZONE

PLOTTING COORDS GRID: I.P. GRID
NORTH: 97414.00N
EAST: 36327.00E
ELEV: 1255.00

ALTERNATE COORDS GRID:
NORTH: 974+14N
EAST: 363+27E
ELEV: 1255.00

COLLAR DIP: -49° 0' 0"
LENGTH OF THE HOLE: 87.20m
START DEPTH: 0.00m
FINAL DEPTH: 87.20m

COLLAR GRID AZIMUTH: 95° 0' 0"
COLLAR ASTRONOMIC AZIMUTH: 95° 0' 0"

DATE STARTED: August 15, 1992
DATE COMPLETED: August 16, 1992
DATE LOGGED: August 16, 1992

COLLAR SURVEY: NO
MULTISHOT SURVEY: NO
RQD LOG: YES

PULSE EM SURVEY: NO
PLUGGED: NO
HOLE SIZE: NQ

CONTRACTOR: Atlas Drilling
CASING: REAMED TO 9.75 m
CORE STORAGE: WOLF CAMP

PURPOSE: TEST RIDGE ZONE BRECCIA VEIN DOWN DIP TO WEST OF MAIN SHOWING.

DIRECTIONAL DATA:

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments	Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
16.76	-	-49° 0'	ACID	OK		-	-	-	-	-	
49.10	-	-49° 0'	ACID	OK		-	-	-	-	-	
64.31	-	-49° 0'	ACID	OK		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 3.10	«CASING»					
3.10 TO 12.20	«FQXT OR TILL»	Colour: Brown to green. Grain size: Variable. Description: Rubble composed of rounded (ground) cobbles of the crystal tuff unit. Rounded diorite pebbles present from 7.9 to 10.7m. 10.7-12.2 Conglomerate rubble.		¦3.1-12.2¦«m-chl, tr-w sil» Interval is pervasively chloritized. Strong chlorite, m-ser	None. Weak limonite staining along fractures and on outside surfaces of core.	Possibly still in overburden or exotic cobbles fell in hole when reaming casing. Recovery 15%.
12.20 TO 22.60	«FLOW BANDED RHYOLITE»	Colour: Creamy-grey. Grain size: Fine. Description: Flow banded to convolute flow banded rhyolite. Varies from aphyric to plag porphyritic to quartz eye. Spherulites noted at 16.9-17.0. Interval is variably fractured and brecciated. Jigsaw breccias and narrow quartz stockwork zones (5-15cm) occur throughout. 16.4-16.8 Veniform zones of quartz-hm-chl alteration. Lower contact ¦17.8-17.9¦«Hyd. Breccia» Heterolithic hydrothermal breccia with silica matrix. Clasts mostly of fine banded rhyolite, angular to rounded. Evidence of multi-stage brecciation i.e. truncated veins and breccia clasts. ¦18.75-19.5¦«Jigsaw bx/Qz stkwrk» 19.9-20.1 Pervasive silicification and quartz stockworking - gradational to jigsaw brecciation. ¦21.2-21.4¦«Hyd. Bx/jigsaw bx»	45	¦12.2-22.6¦«w-s sil, w-hem, w-chl» ¦16.4-16.8¦«s.sil, m-chl, w-hem» ¦17.8-17.9¦«s. sil» ¦19.9-20.1¦«s-sil» ¦21.2-21.4¦«s-sil»	¦12.2-22.6¦«tr v.f.gr Py» ¦17.8-17.9¦«tr. vfg Py»	Silicification increasing in intensity down hole.
22.60 TO 25.00	«HYDROTHERMAL BRECCIA»	Colour: Grey-brown Grain Size: Variable Description: Heterolithic hydrothermal breccia unit. Clasts are angular to rounded and vary in size from <1mm to 30mm. Randomly oriented and matrix supported. Clasts mostly of flow banded rhyolite but episodically silicified clasts and vein (some bladed) are present. Interval contains sparse green cavities up to 25mm by 10 mm in dimension. Matrix completely replaced by grey translucent silica.		¦22.6-25.0¦«i-sil»	¦22.6-25.0¦«Tr vfg diss Py» Weak limonite staining.	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		24.1-24.7 Colour: Pale grey. Description: Similar hydrothermal breccia to main interval but completely overprinted by translucent grey silica. Some banding and blading textures noted.		⟦24.1-24.7⟧«extreme sil»	⟦24.1-24.7⟧«Py tr» Fine grained brilliant red mineral noted in the silica matrix - possibly realgar or ruby silver. Mineral occurs in patches or dustings throughout this section.	Should kick!! Ag?
25.00 TO 37.00	«FLOW BANDED RHYOLITE»	Colour: Tan. Grain size: Fine. Description: Porphyritic variety of the rhyolite. Rock contains approx. 5% 1-5mm rounded quartz phenocrysts and about 1% rectangular plat laths. Flow banding not as well developed - possibly washed out by the alteration. Limonite staining of the matrix suggests that the rock has been pyritized. This is overprinted by quartz stockworking.		⟦25.0-37.0⟧«m-s sil, m-ser» Silicification occurs as <1-2mm envelopes around quartz stringers. Stockwork intensity varies through interval. Rhyolite groundmass is moderately sericitized (or illitized). Individual quartz stringers are banded. Comb textures are present. ⟦35.8-36.5⟧«s-sil»	⟦25.0-37.0⟧«Tr Py» Black mineral notes as envelopes around some micro-fractures (pyrolusite or pyrobitumen?). Good examples at 33.8m. Rhyolite fairly oxidized. Rock is permeated by fine patchy limonite, perhaps hypogene in origin. Could also represent supergene oxidation.	Beginning of argillic zone. Notable pyrolusite.
37.00 TO 38.10	«FB RHYL BR	Colour: Purple brown.		⟦37.0-38.8⟧«w-m sil, m-arg»	⟦37.0-38.8⟧«m-lim» as patches.	
TO 38.80	ECCIA»	Grain size: Variable. Description: Flow banded rholite breccia - autoclastic. Fine grained pheno's of plagioclase and quartz (0.5mm) and spherulitic zones characterize the unit. Upper contact is a sharp fault zone about 2cm wide. Fault occupied by clay gouge. Lower contact (fault), silicified.	60	Pervasive clay alteration and stringers of pale green and white clay. Silicification patchy, decreasing down interval.	Black mineral persists through this section. Occurs as late fracture fillings. It is amorphous and earthy - relatively hard (approx. 4) with a brownish black streak.	
38.10 TO 44.40	«VOLCANICLASTIC SEDS»	Colour: Grey. Grain size: Variable. Description: A fault bounded sequence of volcaniclastic sediments ranging from finely laminated siltstones near the top of the interval to coarse bedded wackes (+30cm) near base. The coarser units		«w-m sil» patchy over entire interval. Most alteration occurs in the finer sediments near the top. Contacts are also silicified. Open fractures-partly filled with limonite prevalent below 41.2m. Weak quartz stockworking through	Py-tr	Relatively unaltered.

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		contain abundant rip-up clasts to 35mm. Bedding and lamination shows signs of soft sediment disruption/contortion.		out. ⟦39.1-39.6⟧ «m-sil»		
44.40 TO 52.30	«QXAT»	Colour: Pale grey. Grain size: Fine. Description: Fine grained unit made up of small rounded qz xtls set in a `glassy' matrix. There are no measurable laminations or bedding features, suggesting perhaps a slurry deposit (subaqueous). Rounded qz xtls up to 2mm in diameter make up about 1-3% of the unit. Vitric shards noted in less altered sections. Upper contact is silicified bx 2cm wide. ⟦44.4-45.0⟧ «Jigsaw Breccia» Brown colour; shattered and healed rock exhibiting at least 4 stages of silicification (by cross-cutting relationships). Youngest event is unhealed leaving a `rice crispy' square textured breccia. These cavities are lined with limonite. Host rocks are completely silicified. ⟦45.9-48.5⟧ «Qz stkwk» Tan-grey; intense multi-stage Qz stkwk. Some veins are well banded. Up to 4 bands are noted. ⟦48.5-48.7⟧ «Jigsaw Breccia» Gradational into true breccia. ⟦49.3-49.4⟧ «Hyd Bx» ⟦52.2-52.3⟧ «Hyd Bx»	25	«mod-s sil» bleaching «Qz Stockwork,jigsaw bx» Top 3m are strongly silicified and stockworked by banded Qz veinlets. Stockworks grade into jigsaw breccia and into true breccia. Bladed Qz vein forms matrix in places. ⟦44.4-45.0⟧ «S-I Sil» ⟦45.9-48.5⟧ «S-I Sil»	No sulphides noted. Abundant limonite as staining in altered fragments and in uncemented bx veins. «M-S lim»	No chalcedony.
52.30 TO 55.50	«QVAT»	Colour: Med grey/beige. Grain size: Fine. Description: Homogeneous textured crystal vitric ash tuff. Rock shows no obvious layering. Upper contact sharp Lower contact -silicified breccia. Rock is moderately stockworked with qz stringers.	50 45	«M Sil,W Arg» Silicification and stockworking abruptly decreases at upper contact. Clay-most likely kaolinite-appears at 55.0m. Clay alteration probably responsible for bleached colour.	«M-S lim» Limonite coats all fractures and fills cavities in open veins.	Argillic alteration line at 55.0m. Possible welding at 56.0m.
55.50 TO 61.00	«QXAT»	Colour: Orange/white. Similar to the silicified unit between 45 and 53m but altered in a different way. Increasing argillic alteration through interval gives rock a sandy txture. The groundmass is also quite heavily limonite stained compared to previus unit.		«M-arg,W-sil» Pervasive kaolinite alteration overprinted by a wide spaced stockwork of Qz stringers with silicified envelopes.	«S-lim»	Argillic zone increasing with depth.

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
61.00 TO 73.20	«QVAT»	Colour: Cream. Grain size: Fine.		Clay alteration increasing down hole. Silicification variable in matrix,very few qz stringers. Some 1-3mm kaolinite veinlets noted. «M-S-Arg,W-M Sil»	«W-M lim» Limonite weaker than last interval,mostly restricted to facture coatings. Fractures most abundant in more silicified zones.	
73.20 TO 86.50	«QXAT»	Colour: Brown/cream. Grain size: Fine. Same as previous QXAT units but with considerably stronger clay alteration. End of hole.		«S-Arg,W-sil-W-AA» Pervasive kaolinite alteration of glassy ash matrix gives rock a sandy texture. Discrete veinlets of kaolinite and possible pale green pyrophyllite increase in abundance down interval.	«Tr-1% D.Py» Py is present in last 6m of hole as microscopic disseminations. Sharp transition from limonite to py at 83.8m. Coincides with onset of pyrophyllite veining. ┤75.3-83.8├ «S-lim»	Base of oxidation at 83.8m. Recovery 40% 73.9-75.0m. Recovery 95% 75.0-79.8m. Advanced argillic at 83.8m.

Sample	From (m)	To (m)	Length (m)	ASSAYS Ag ppm	GEOCHEMICAL As ppm	Ba ppm	Cu ppm	Fe %	Pb ppm	Sb ppm	Zn ppm	Au ppb	Hg ppb	S %	Aug/t g/t	COMMENTS
10977	12.40	13.80	1.40	0.9	31	50	12	1.4	11	1	53	430	75	0.03		
10978	13.80	15.30	1.50	1.2	27	14	7	0.6	18	1	25	30	55	0.01		
10979	15.30	16.80	1.50	1.3	29	16	6	0.7	27	1	31	14	60	0.02		
10980	16.80	18.30	1.50	1.5	18	21	6	0.69	63	1	37	28	50	0.01		
10981	18.30	19.80	1.50	1	19	12	5	0.71	58	1	34	32	45	0.02		
10982	19.80	21.30	1.50	2.4	23	12	5	0.82	61	1	34	25	70	0.01		
10983	21.30	22.60	1.30	2.2	25	11	6	0.87	48	1	42	24	40	0.01		
10984	22.60	23.10	0.50	0.7	23	11	6	0.65	30	1	42	10	45	0.03		
10985	23.10	24.10	1.00	16.8	20	21	8	0.45	14	1	19	1440	35	0.01	1.65	
10986	24.10	24.40	0.30	44.1	15	9	7	0.3	7	1	2	1700	70	0.01	1.77	
10987	24.40	25.00	0.60	6.4	59	32	8	0.7	9	1	48	710	25	0.02	0.84	
10988	25.00	26.30	1.30	3.1	127	57	6	0.65	14	1	40	320	35	0.01		
10989	26.30	28.00	1.70	3.6	114	113	6	0.73	19	1	43	382	25	0.01		
10990	28.00	29.50	1.50	1.8	107	43	6	0.67	13	1	38	104	35	0.01		
10991	29.50	31.00	1.50	2.4	84	32	5	0.61	14	1	44	390	45	0.01		
10992	31.00	32.50	1.50	1.9	90	23	5	0.67	14	1	40	830	30	0.01	0.98	
10993	32.50	34.00	1.50	1.3	82	29	5	0.63	18	1	41	236	40	0.02		
10994	34.00	35.50	1.50	1	61	13	5	0.55	15	1	33	486	40	0.01		
10995	35.50	37.00	1.50	1.9	65	55	5	0.67	16	1	37	163	35	0.01		
10996	37.00	37.30	0.30	1.7	26	30	4	0.43	50	1	25	62	30	0.01		
10997	37.30	38.10	0.80	4.4	40	85	6	0.67	35	1	50	152	65	0.02		
10998	38.10	39.10	1.00	3.8	77	79	25	1.15	25	1	97	306	60	0.01		
10999	39.10	39.60	0.50	5.8	117	26	33	1.44	18	2	81	5020	45	0.03	5.05	
11000	39.60	40.70	1.10	2.9	42	37	39	0.62	13	1	59	505	40	0.01	0.52	
10951	40.70	42.20	1.50	0.5	28	36	16	1.16	8	1	98	76	45	0.01		
10952	42.20	43.40	1.20	0.8	16	55	25	1.83	19	1	129	111	30	0.01		
10953	43.40	44.40	1.00	4.2	31	38	44	0.66	26	1	73	243	65	0.02		
10954	44.40	45.00	0.60	3.3	26	33	26	0.75	8	1	36	660	70			
10955	45.00	45.70	0.70	4.6	30	18	13	0.69	14	1	34	839	55			
10956	45.70	47.20	1.50	6.7	16	9	5	0.52	7	1	35	1865	85			
10957	47.20	48.50	1.30	2	31	32	6	0.71	25	1	49	146	55			
10958	48.50	50.00	1.50	1.4	11	36	4	0.54	8	1	34	370	60			
10959	50.00	51.50	1.50	2.1	33	17	5	0.55	15	1	29	1200	60			
10960	51.50	52.30	0.80	2.1	51	23	7	0.84	13	1	44	414	75			
10961	52.30	53.80	1.50	0.5	12	15	3	0.36	3	1	27	34	50			
10962	53.80	55.50	1.70	0.5	16	24	3	0.45	8	1	30	14	55	0.01		
10963	55.50	57.00	1.50	0.9	41	15	5	0.83	8	1	42	85	55	0.01		
10964	57.00	58.50	1.50	2.2	23	18	5	0.84	17	1	49	39	85	0.02		

Sample	From (m)	To (m)	Length (m)	Ag ppm	As ppm	Ba ppm	Cu ppm	Fe %	Pb ppm	Sb ppm	Zn ppm	Au ppb	Hg ppb	S %	Aug/t g/t		
10965	58.50	60.00	1.50	2.3	31	16	4	0.79	6	1	47	293	70	0.01			

Sample	From (m)	To (m)	Length (m)	
	0.00	0.00	0.00	

From (m)	To (m)	Length (L)	Sum Of Length S>= 0.00cm	RQD S/LX100	Number Of Fracturs	Fracturs Per Metres	Number Of Veins	Veins Per Metres	Angle	Comments
12.40	13.80	1.40	0.00	0.0	17	12.14	11	7.86	0	
13.80	15.30	1.50	48.70	*****	22	14.67	10	6.67	0	
15.30	16.80	1.50	28.70	*****	16	10.67	26	17.33	0	
16.80	18.30	1.50	0.00	0.0	30	20.00	20	13.33	0	
18.30	19.80	1.50	42.30	*****	23	15.33	46	30.67	0	
19.80	21.30	1.50	14.00	933.3	14	9.33	35	23.33	0	
21.30	22.60	1.30	43.70	*****	20	15.38	26	20.00	0	
22.60	23.10	0.50	73.00	*****	3	6.00	12	24.00	0	
23.10	24.10	1.00	66.50	*****	6	6.00	5	5.00	0	
24.10	24.40	0.30	100.00	*****	0	0.00	3	10.00	0	
24.40	25.00	0.60	0.00	0.0	14	23.33	15	25.00	0	
25.00	25.60	0.60	0.00	0.0	0	0.00	0	0.00	0	
34.00	35.50	1.50	16.00	*****	32	21.33	22	14.67	0	
35.50	37.00	1.50	16.00	*****	27	18.00	22	14.67	0	
37.00	37.30	0.30	0.00	0.0	5	16.67	5	16.67	0	
37.30	38.10	0.80	0.00	0.0	41	51.25	6	7.50	0	
38.10	39.10	1.00	42.00	*****	10	10.00	6	6.00	0	
39.10	39.60	0.50	0.00	0.0	4	8.00	12	24.00	0	
39.60	40.70	1.10	19.50	*****	10	9.09	10	9.09	0	
40.70	42.20	1.50	32.00	*****	12	8.00	23	15.33	0	
42.20	43.40	1.20	23.30	*****	17	14.17	23	19.17	0	
43.40	44.40	1.00	26.00	*****	17	17.00	12	12.00	0	
44.40	45.00	0.60	60.00	*****	5	8.33	24	40.00	0	
45.00	45.70	0.70	68.60	*****	8	11.43	34	48.57	0	
45.70	47.20	1.50	0.00	0.0	22	14.67	37	24.67	0	
47.20	48.50	1.30	20.40	*****	17	13.08	27	20.77	0	
48.50	50.00	1.50	18.70	*****	20	13.33	34	22.67	0	
50.00	51.50	1.50	0.00	0.0	30	20.00	39	26.00	0	
51.50	52.30	0.80	0.00	0.0	20	25.00	10	12.50	0	
52.30	53.80	1.50	0.00	0.0	100	66.67	4	2.67	0	
53.80	55.50	1.70	0.00	0.0	42	24.71	11	6.47	0	
55.50	57.00	1.50	0.00	0.0	32	21.33	16	10.67	0	
57.00	58.50	1.50	14.70	980.0	37	24.67	7	4.67	0	
58.50	60.00	1.50	13.30	886.7	25	16.67	6	4.00	0	

HOLE NUMBER: WF-92-08

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: WOLF92
PROJECT NUMBER: 673
CLAIM NUMBER:
LOCATION: LOOKOUT ZONE

PLOTTING COORDS GRID: I.P. GRID
NORTH: 97400.00N
EAST: 36185.00E
ELEV: 1258.00

ALTERNATE COORDS GRID: I.P. GRID
NORTH: 974+ 0N
EAST: 361+85E
ELEV: 1258.00

COLLAR DIP: -55° 0' 0"
LENGTH OF THE HOLE: 160.30m
START DEPTH: 0.00m
FINAL DEPTH: 160.30m

COLLAR GRID AZIMUTH: 90° 0' 0"
COLLAR ASTRONOMIC AZIMUTH: 90° 0' 0"

DATE STARTED: August 17, 1992
DATE COMPLETED: August 18, 1992
DATE LOGGED: August 19, 1992

COLLAR SURVEY: NO
MULTISHOT SURVEY: NO
RQD LOG: YES

PULSE EM SURVEY: NO
PLUGGED: NO
HOLE SIZE: NQ

CONTRACTOR: ATLAS DRILLING LTD.
CASING: REAMED 0.6m
CORE STORAGE: CAMP

PURPOSE: TO TEST GEOPHYSICAL ANOMALY NORTH OF LOOKOUT ZONE WEST OF RIDGE ZONE.

DIRECTIONAL DATA:

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments	Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
111.56	-	-54° 0'	ACID	ok		-	-	-	-	-	
160.30	-	-51° 0'	ACID	OK		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 0.60	«CASING»					From 0.6 to 3.4 core is rubbly.
0.60 TO 80.30	«B PORPHYRY»	Colour:Maroon grey to dark grey to grey green Grain size: m.g. - c.g. Description: Medium to coarse grained felspar porphyritic tuff. Feldspars range from mm scale to 1 cm locally. crystals are amhedral, broken to euhedral. Quartz crystals are fine grained (1-3mm) and < 1% of rock. Occasional lapilli size lithic fragments are seen. Matrix is aphanitic black to brown glassy with minor welding. 1 - 2cm wide "injections" of coarse feldspar porphyritic dykelets are seen randomly throughout. These have an aphanitic matrix that is weakly to moderately magnetic and contains euhedral feldspars.		3.4 - 28.4 «w. sil, w. pyroph»	«M. Mt.»	
		3.4-5.8 Minor hydrothermal veinlets and breccias.		«w sil» As veinlets, tr lime green pyrophyllite.		
		5.8-6.2		«s arg» Possible rhodocrosite		
		16.2-18.6 Fracture surfaces tend to be oxidized		«w sil»		
		23.0-25.3 Minor bladed quartz and open vugs, veinlets are banded, light and dark.				
		ǂ27.6-27.9ǂ «hydrothermal vein» blading and open cavities.	90			
		28.4-80.3		propylitic w-m chl, w-m sil		
		ǂ29.5-30.6ǂ		«m-s sil, w-m Mt, m chl»	Black fine grained mineral, metallic in areas, forming along fractures and extending into wallrock-possibly psilomelane. «psilo»	
		ǂ30.6-35.7ǂ Weakly altered (sil) rock, with minor Mt, limonitic veining, bladed quartz veinlets.		«w sil»		
		ǂ35.7-36.3ǂ «Hydrothermal Breccia Vein» "Rice Krispie" hydrothermal breccia consisting of rounded, completely silicified fragments cemented by silica		«i sil»	Black fine grained mineral, metallic in areas, forming along fractures and extending into wallrock - possibly psilomelane	60% Recovery
		35.7-36.3 «stockwork sil»			«psilo»	
		37.2-37.3 Small zone of stockwork veining and brecciation, minor blading		«i sil»		
		37.8-39.1		«s sil, w sil»	«w-m Mt»	
		ǂ39.1-39.8ǂ «hydrothermal bx vein» consisting of angular fragments in banded and bladed quartz. Alternating white, brown, red brown banded silica. at 41.0 small 5 cm wide white banded qtz vein oriented	60 50	«i-x sil, w pyroph» Pyrophyllite occurs as bright lime green greasy mineral in open cavities	Pyrolusite or psilomelane in trace amts «psilo? -tr»	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		⟨42.2-43.5⟩		«w sil stkwrk»		
		⟨43.5-43.8⟩		«m sil stkwrk»		
		44.3-44.4 Bladed silica vein	40		Minor psilomelane or pyrolusite	
		45.1-45.3		«w chl»	«tr f.g. Py» Occurs along fractures	
		@ 49.4 5cm wide quartz vein, selvages are chloritic, pyritic	50			
		⟨49.5-53.4⟩		«w sil»	«<1% f.g. Py»	
		⟨53.4-54.2⟩		«s sil, w-m chl» Chl occurs in small open cavities associated with fine pyr		
		⟨54.2-55.4⟩		«m sil, w chl»	«tr Py»	
		55.4-56.0		«i sil» Occurs as stockwork and drusy quartz lined cavities		
		56.7-57.0		«i sil» Veined silicification	«1% v.f.g. Py»	
		⟨57.0-57.9⟩		«m-s sil»		
		59.1-59.3		«s-i sil»		
		⟨60.5-62.4⟩		«i-x sil»	«m-s lim»	
		⟨62.4-64.2⟩ Mod to strong sil, chl, with minor drusy quartz lined cavity rimmed by banded silica.		«m-s sil, m chl»	minor Mt «tr v.f.g. diss Py»	
		64.2-64.3 10cm wide bladed quarts vein with limonite staining				
		⟨64.7-65.1⟩		«s sil, m chl»	«tr Py»	
		⟨65.1-71.6⟩ Minor open cavities occur through interval		«m-s sil, m-s chl» Chl occurs along fractures and as veinlets. Sil is pervasive bleaching of matrix and minor stockwork.		
		⟨71.6-72.4⟩		«s-i sil» Pervasive with minor open cavities.		
		⟨72.4-75.5⟩		«m sil, m chl, w lim» Sil is pervasive with minor 3-5 cm white banded quartz veins. Minor bladed veins are seen	«tr Py»	
		⟨75.5-76.3⟩ «sil stockwork» Feldspars and matrix strongly bleached, giving speckled spotted appearance. Minor bladed and banded textures are seen. core is also pervasively silified.		«s-i sil, m-s lim» Silicification occurs pervasive as will as stockwork and brecciation.	«Py veinlets» Occur with silicification as v.f.g. disseminations in vienlets.	
		⟨76.3-77.7⟩ Arg. Alt Minor banded quartz veinlets. Bottom alteration contact fairly sharp.	60	«s arg, s lim» Core is quite soft, strongly altered to clay. Limonite forms circular and convoluted Fe oxide patterns. Fe oxidation selveges about pyritic veinlets up to 10 cm.	«Pyritic veinlets»	
		⟨77.7-80.3⟩ Interval is intensely silicified but original textures remain. Cut by bladed veinlets and veins to 10 cm, generally overprinted by silica. Minor banded silica.		«i sil, w-m lim»	«tr v.f.g. py» Occurs as veinlets and disseminations	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
80.30 TO 95.20	«BX/STWK»	Colour: Grey to white to variable Grain size: Variable Description: The interval consists or varying degrees of hydrothermal stockworking, brecciation and veining. Veining is banded chalcedonic and banded silicic, alternating light and dark bands, with at least 20-30 bands in some areas. Quite often the central portion of these veins is bladed quartz overprinted by silica. Darker bands may contain metallics, pyrite and possible electrum. Brecciated fragments are generally rimmed by silica banding. Open bladed quartz veining is also common. Locally, rebrecciation and silicification is noted by broken and resilicified banded fragments. Drusy quartz lined vugs and open veins are seen locally.				
		⌊80.3-82.1⌋ «w-m jigsaw bx» Fairly tight jigsaw bx stwk with minor 10 cm wide m-s stockwork bx with blading, banded silica.		«s sil, m lim»	«tr Py, electrum?» Dark mineral forming bands.	
		⌊82.1-84.0⌋ «w jigsaw bx» Again contains small in-tervals of 10cm that are strongly brecciated and healed by bladed quartz and banded quartz chalcedony. One veinlet oriented	40	«s sil, m lim»	«tr Py» in veinlets	
		⌊84.0-85.9⌋ «hyd bx» More open brecciated textures generally heated by bladed silica. Common open drusy quartz lined vugs.		«s-i sil»	«tr pyrolusite/psilomelane?» Dark black metallic mineral as small veinlets along fractures.	
		⌊85.9-87.8⌋ «s hydrothermal bx» Strongly brecciated, variable fragment size, shape and orientation. Fragments rimmed by banded silica. Some banded silica frags truncated by later brecciation. Bottom contact approx.	40	«s-i sil»	«tr pyrolusite/psilomelane?» As veinlets along fractures	
		⌊87.8-88.6⌋ «bladed vein» Bladed sil vein reheal ed by sil. Minor convoluted banding. Common open drusy quartz lined cavities.		«x sil»	«tr Py» As f.g. dissem.	
		⌊88.6-91.0⌋ «s stwk/hyd bx» As for 85.9-87.8. Multi-episodic silica healed - 30-40 events of sil deposition. Bottom contact knife sharp.	54			
		⌊91.0-91.9⌋ «heterolithic hyd bx» This interval is grey in colour, composed of moderately silicified fragments of volcanic and sedimentary origin. Fragments range from several centimetres in size to very fine grained mm scale. These are cut by late silica veinlets as well as containing truncated veinlets. Some fragments rimmed by silica. Minor blading is seen. Bx is fragment supported, moderately silicified. Cut by minor		«m sil»	«tr pyrolusite/psilomelane»	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		bladed veins. ⌈91.9-95.2⌋ «Bladed vein» White bladed and 'Rice Krispie' brecciated interval completely resilicified. Banding	50	«x sil»	«tr pyrolusite/psilomelane?» Occurs as spotty patches on fractures surfaces. Possible ruby silver	Mislatch of 95.1, 5' of core missing 50% Recovery 93.0-95.1 17% Recovery
95.20 TO 98.00	«QZ PHYRIC RHYOLITE»	Colour: Variable grey to buff grey Grain size: fine-grained Description: Buff grey quartz eye rhyolite intrusion or possibly ash tuff. < 1% 1-3mm quartz eyes in fine grained matriz. The interval is generally argillicly altered and silicified. Minor hydrothermal breccias cross cut the interval characterized by banded and bladed silica. ⌈95.2-95.7⌋ «w-m stwk» Minor stockwork. Hydrothermal breccia veins cut interval. Some blading. ⌈96.3-97.1⌋ «w stwk» Brecciated stockwork veins ⌈97.1-97.8⌋ «m-s jigsaw bx» Jigsaw brecciated fragments in silicified matrix. Banded quartz lined vugs.	12	«m Arg, m sil, m lim» Fe oxidation of matrix. Some dark hematitic bands seen. «m sil» «m-s sil, w lim»	«tr Py»	
98.00 TO 110.80	«INTERBEDDED SLTS/SAND»	Colour: Dark grey to black Grain Size: Fine-grained Description: Dark grey to black fine grained interbedded argillaceous, pyritic siltstones and sandstones. Bedding is on mm scale to metre scale generally as thin fine grained laminations. Very minor zones (<10cm) of quartz-pyrite stockworking are seem. Minor hydrothermal breccias are present Occasional areas of slump faults and sed. breccias are present; tops are indicated to be hole up. 98.0-98.3 «w Qz stwk» At 98.7 small bx 100.2-100.3 Minor open qtz Py stockwork veinlets. 101.4-101.5 Minor qtz Py stockwork 102.0 Bedding ⌈106.1-107.6⌋ «Jigsaw Bx» White drusy quartz lined cavities as well as weakly banded hydrothermal bx veins, fragments rimmed. 108.6 H'drothermal vein 110.2 Bedding 100.8 Lower contact Bedding immediately before contact shows fining upward sequence indicating tops are up. However,	26 54 60	«w arg» minor talc of pyrophyllite?? «wk sil» wk hematite selvage «s sil»	«1-2% v.f.g. Py» Finely disseminated throughout matrix. «tr Py»	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		contact is angular unconformity with overlying beds truncated. This may be an intrusive contact. Margin appears chilled, brecciated.				
110.80 TO 123.70	«QP RHYOLITE»	Colour: Grey Grain size: Fine-grained Description: 1-3% euhedral feldspars (1mm) and <1% quartz eyes in fine grained feldspar matrix. Occasional flow banded textures seen. Relatively fresh unit. Minor bladed veinlets and intrusive jigsaw breccias seen throughout. Occasional drusy quartz lined cavities. ╟117.7-120.6╢ @120.8 Small Fe oxide alteration. Bottom contact is brecciated (intrusive contact) ╟121.4-123.7╢ «Autoclastic Breccia»		«w arg» «mod sil» Pervasive		
123.70 TO 126.00	«CRYSTAL CITRIC ASH TUFF»	Colour: Maroon to green grey Grain Size: Fine-grained Description: Consists of rounded quartz and feldspar crystals in banded fine-grained matrix. Minor fiamme are present. ╟123.7-124.4╢ Tuff is maroon coloured 124.4-125.0 Tuff is grey green colour 125.0-126.0 Tuff is maroon colour Banding oriented 125.5-125.6 Fault gouge Bottom contact may be faulted.	 70	«w arg, w pyrophyllite» Pyrophyllite occurs along fractures «w-m hem» «w-m hem»		
126.00 TO 128.50	«INTERBEDDED CGL/SST»	Colour: Grey green Grain size: Medium-grained to coarse-grained Description: Sequence of grey green heterolithic unsorted coarse angular conglomerate and grey muddy medium grained to fine grained sandstone/ siltstone with clayrich matrix. Minor quartz stringers. Fragments are angular, argillaceous sediments, arenites and minor volcanics.				
128.50 TO 130.80	«HETEROLITHIC BRECCIA 2»	Colour: Grey Grain Size: Coarse grained Description: Matrix supported, sub-angular poorly sorted heterolithic fragments in coarse sandy matrix. Fragments are argillite, arenite, volcanic in origin. Matrix poorly consolidated. Fragments to 10 cm in dimension.				

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
130.80 TO 136.40	«FELDSPAR CRYSTAL TUFF»	Colour: Grey Grain Size: Coarse grained Description: Coarse arenite, feldspar rich. Bottom contact is intrusive. Chilled margin. 132.5-133.3 Felsic intrusive (see 110.8-123.7) 134.5 Bedding Bottom contact silicified (2 cm wide bladed vein) Fault contact {132.6-132.9} «Stony Rhyolite} {132.9-136.4} «Crystal Tuff»	90 44 90		«tr f.g. Py»	
136.40 TO 136.80	«FAULT GOUGE»	Fabric oriented	90	Clay altered		
136.80 TO 139.90	«HETEROLITHIC BRECCIA 1»	Colour: Grey Grain Size: Coarse grained Description: Poorly consolidated or strongly clay altered cobble breccia. Fragments are sub-rounded to rounded, primarily granitic composition cut by numerous zones of clay gougy material most likely faults. Matrix supported. 138.6 Fault 141.2 Fault 141.8-142.0 Fault		«m arg»	«tr Py»	
139.90 TO 148.10	«FAULT»	Colour: Green Grain size: Variable Description: Clay altered gougy material. {146.2-146.7} «Andesite Dyke» {146.7-147.3} «St Rhyl Bx - fault?» Silicified, argillicly altered bx.	90	«chl» «sil, w arg»		
148.10 TO 157.90	«MONOMICTIC BRECCIA»	Colour: Grey green Grain Size: Variable Description: Clast supported, angular to sub-angular fragments. Looks like a hydrobreccia. Despite complete fragmentation primary layering is still visible. Clasts consists of brown to green aphyric rhyolite. Matrix is rock flour. Clasts are moderately silicified. 155.3 Fault		«s chl, m arg» Minor pyrophyllite		Mislatch @ 151.8 lost 2.5 m.

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
157.90 TO 160.30	«HETEROLITHIC BRECCIA 1»	Colour: Grey green Grain Size: Variable Description: Subrounded to subangular moderately sorted heterolithic clasts in sandy matrix. Fragments are intrusive, granitic, sedimentary, jasperoidal. EOH				

Sample	From (m)	To (m)	Length (m)	ASSAYS Ag ppm	GEOCHEMICAL As ppm	Ba ppm	Cu ppm	Fe %	Pb ppm	Sb ppm	Zn ppm	Au ppb	Hg ppb	S %	Aug/t g/t	COMMENTS
39887	22.90	24.60	1.70	0.8	29	19	3	0.73	6	1	94	7	60	0.03		
39886	24.60	26.10	1.50	1.2	25	17	3	0.9	9	1	90	32	50	0.01		
39885	26.10	27.60	1.50	1.5	44	18	2	0.97	5	1	94	75	50	0.01		
39884	27.60	28.30	0.70	0.7	29	15	2	1.01	5	1	91	2	60	0.09		
39883	28.30	29.80	1.50	1.3	37	15	3	0.87	6	1	71	42	55	0.01		
39882	29.80	31.20	1.40	0.6	30	22	3	1.7	6	1	93	34	45	0.12		
39881	31.20	32.70	1.50	0.6	21	14	3	1.06	4	1	84	1	55	0.07		
39880	32.70	34.20	1.50	0.7	39	16	2	1.16	6	1	77	18	35	0.2		
39879	34.20	35.70	1.50	1	45	19	3	1.03	8	1	81	136	50	0.17		
39878	35.70	36.70	1.00	9.3	20	46	4	1.14	12	1	93	554	65	0.03	0.54	
39877	36.70	38.20	1.50	0.9	32	25	2	1.39	8	1	99	65	55	0.13		
39876	38.20	39.70	1.50	5.1	20	25	5	1.08	7	1	94	173	60	0.09		
39875	39.70	40.30	0.60	3.4	29	18	5	1.23	16	1	68	202	70	0.12		
39874	40.30	41.80	1.50	1.4	34	28	4	1.42	9	1	84	38	65	0.12		
39873	41.80	43.20	1.40	1.3	43	16	4	1.05	6	1	88	17	50	0.19		
39872	43.20	44.30	1.10	1.3	32	17	14	1.24	7	1	95	79	55	0.2		
39871	44.30	45.00	0.70	5.6	28	22	3	0.96	7	1	77	817	75	0.11	0.79	
39870	45.00	46.50	1.50	0.4	22	15	2	0.91	8	1	75	4	60	0.18		
39869	46.50	48.00	1.50	0.2	35	19	2	1.65	7	1	72	19	55	0.21		
39868	48.00	49.50	1.50	0.1	27	28	4	1.72	9	1	87	24	65	0.45		
39867	49.50	50.90	1.40	0.2	22	27	2	1.78	10	1	84	14	45	0.37		
39866	50.90	52.40	1.50	0.5	28	43	3	1.94	8	1	89	29	70	0.39		
39865	52.40	53.90	1.50	0.6	34	53	3	2.12	6	1	94	17	45	0.61		
39864	53.90	55.40	1.50	1.1	23	48	3	1.95	7	1	88	35	50	0.59		
39863	55.40	56.70	1.30	1.6	33	45	3	2.22	7	1	86	52	35	0.75		
39862	56.70	57.70	1.00	1.5	33	56	3	2.19	6	1	103	17	70	0.67		
39861	57.70	59.10	1.40	0.7	38	41	2	1.76	3	1	100	18	60	0.43		
39860	59.10	60.50	1.40	1.3	29	42	2	1.68	6	1	111	50	65	0.44		
39859	60.50	61.80	1.30	2.4	36	53	3	1.43	3	1	67	175	60	0.53		
39858	61.80	63.30	1.50	1.9	68	38	3	2.05	4	1	79	86	60	0.9		
39857	63.30	64.80	1.50	0.7	61	32	2	2	6	1	85	29	65	0.79		
39856	64.80	66.40	1.60	0.7	39	39	3	2.09	12	1	94	20	35	0.83		
39855	66.40	67.90	1.50	1	30	41	2	1.76	9	1	87	15	50	0.67		
39854	67.90	69.40	1.50	0.8	33	42	3	1.58	7	1	86	11	60	0.45		
39853	69.40	70.90	1.50	1.2	32	36	3	1.51	9	1	88	24	50	0.37		
39852	70.90	72.40	1.50	2.2	39	27	3	1.26	8	1	74	25	55	0.46		
39851	72.40	73.90	1.50	1.5	34	26	4	1.14	18	1	77	44	80	0.43		
39850	73.90	75.40	1.50	2.6	60	33	5	1.29	9	1	86	41	50	0.47		

Sample	From (m)	To (m)	Length (m)	Ag ppm	As ppm	Ba ppm	Cu ppm	Fe %	Pb ppm	Sb ppm	Zn ppm	Au ppb	Hg ppb	S %	Aug/t g/t
39849	75.40	76.20	0.80	2.4	50	14	4	0.84	8	2	46	98	45	0.39	
39848	76.20	77.70	1.50	1.2	25	22	3	1.43	5	1	88	67	65	0.04	
39847	77.70	78.90	1.20	3.2	32	16	3	0.8	5	1	56	236	65	0.19	
39846	78.90	79.40	0.50	3.9	38	15	3	0.96	9	1	58	329	70	0.29	
39826	79.40	80.70	1.30	5	43	23	12	1.02	3	1	70	139	90	0.26	
39827	80.70	81.30	0.60	7.1	34	26	6	0.83	6	1	61	125	75	0.11	
39828	81.30	82.00	0.70	29.5	33	16	5	0.6	4	1	32	1550	80	0.09	1.58
39829	82.00	82.80	0.80	4.1	37	13	3	0.66	3	1	48	167	55	0.27	
39830	82.80	83.40	0.60	9.5	48	17	8	1.2	6	1	56	569	70	0.4	0.64
39831	83.40	83.80	0.40	2.6	11	33	4	0.58	2	1	56	131	45	0.04	
39832	83.80	85.30	1.50	3.4	11	27	13	0.78	6	1	63	108	70	0.03	
39833	85.30	86.30	1.00	14.9	18	11	3	0.5	6	1	30	1625	45	0.04	1.12
39834	86.30	87.30	1.00	5.2	17	14	4	0.47	6	1	26	121	60	0.02	
39835	87.30	87.80	0.50	5.1	13	11	3	0.4	2	1	22	170	55	0.03	
39836	87.80	88.60	0.80	6.2	16	15	3	0.3	6	1	14	870	80	0.03	0.76
39837	88.60	89.60	1.00	8.3	15	29	3	0.44	6	1	29	812	75	0.04	0.79
39838	89.60	91.00	1.40	29.3	16	71	5	0.53	7	1	31	3200	55	0.03	3.35
39839	91.00	91.80	0.80	13.8	18	31	8	0.84	7	1	78	701	85	0.02	0.82
39840	91.80	93.00	1.20	15.3	15	24	6	0.27	4	1	12	749	45	0.02	0.78
39841	93.00	95.10	2.10	23.8	19	23	11	0.35	6	1	14	2000	65	0.03	1.52
39842	95.10	95.70	0.60	47.5	80	15	30	0.65	7	1	36	10000	80	0.17	7.28
39843	95.70	96.30	0.60	10.4	71	5	12	0.48	8	1	22	1000	65	0.14	1.02
39844	96.30	97.10	0.80	12	60	8	8	0.84	15	1	39	2250	50	0.11	2.1
39845	97.10	98.00	0.90	6.6	30	10	5	0.54	11	1	31	1770	65	0.06	1.89
39888	98.00	99.50	1.50	8.9	20	19	10	0.99	19	1	104	915	55	0.12	0.81
39889	99.50	101.00	1.50	3.4	18	19	17	0.98	21	1	172	459	65	0.17	
39890	106.10	107.60	1.50	5.4	13	13	5	0.73	14	1	85	857	70	0.07	0.96
39891	112.00	113.50	1.50	1.7	114	7	3	0.76	18	2	121	137	55	0.36	
39892	113.50	115.20	1.70	2.6	58	7	2	0.74	23	2	138	351	65	0.26	
39893	115.20	115.70	0.50	1.3	55	10	4	0.64	22	1	119	344	60	0.21	
39894	115.70	117.40	1.70	1.9	85	9	3	0.63	14	1	95	271	50	0.34	
39895	119.20	120.20	1.00	1.1	65	7	2	0.9	16	1	113	172	70	0.29	
39896	149.00	151.80	2.80	0.1	10	15	7	0.76	54	4	70	2	65	0.12	
39897	151.80	153.90	2.10	0.1	1	29	10	1.84	65	1	144	3	80	0.12	

Sample	From (m)	To (m)	Length (m)	
	0.00	0.00	0.00	

From (m)	To (m)	Length (L)	Sum Of Length S>= 0.00cm	RQD S/LX100	Number Of Fracturs	Fracturs Per Metres	Number Of Veins	Veins Per Metres	Angle	Comments
22.90	24.60	1.70	0.00	0.0	36	21.18	25	14.71	0	
24.60	26.10	1.50	36.70	*****	33	22.00	21	14.00	0	
26.10	27.60	1.50	44.70	*****	26	17.33	18	12.00	0	
27.60	28.30	0.70	0.00	0.0	9	12.86	18	25.71	0	
28.30	29.80	1.50	29.30	*****	15	10.00	9	6.00	0	
29.80	31.20	1.40	33.20	*****	16	11.43	12	8.57	0	
31.20	32.70	1.50	38.00	*****	11	7.33	8	5.33	0	
32.70	34.20	1.50	31.00	*****	22	14.67	17	11.33	0	
34.20	35.70	1.50	0.00	0.0	11	7.33	16	10.67	0	
35.70	36.70	1.00	32.50	*****	23	23.00	18	18.00	0	
36.70	38.20	1.50	50.70	*****	12	8.00	18	12.00	0	
38.20	39.70	1.50	60.70	*****	9	6.00	24	16.00	0	
39.70	40.30	0.60	37.50	*****	4	6.67	3	5.00	0	
40.30	41.80	1.50	14.70	980.0	9	6.00	16	10.67	0	
41.80	43.20	1.40	31.40	*****	12	8.57	19	13.57	0	
43.20	44.30	1.10	55.50	*****	8	7.27	26	23.64	0	
44.30	45.00	0.70	41.40	*****	4	5.71	10	14.29	0	
45.00	46.50	1.50	13.30	886.7	20	13.33	9	6.00	0	
46.50	48.00	1.50	48.70	*****	11	7.33	20	13.33	0	
48.00	49.50	1.50	17.30	*****	16	10.67	14	9.33	0	
49.50	50.00	0.50	0.00	0.0	27	54.00	16	32.00	0	
50.90	52.40	1.50	0.00	0.0	23	15.33	14	9.33	0	
52.40	53.90	1.50	36.70	*****	14	9.33	14	9.33	0	
53.90	55.40	1.50	33.30	*****	15	10.00	22	14.67	0	
55.40	56.70	1.30	24.60	*****	10	7.69	12	9.23	0	
56.70	57.70	1.00	0.00	0.0	11	11.00	19	19.00	0	
57.70	59.10	1.40	14.30	*****	17	12.14	17	12.14	0	
59.10	60.50	1.40	39.30	*****	8	5.71	14	10.00	0	
60.50	61.80	1.30	0.00	0.0	15	11.54	16	12.31	0	
61.80	63.30	1.50	0.00	0.0	23	15.33	31	20.67	0	
63.30	64.80	1.50	67.00	*****	7	4.67	24	16.00	0	
64.80	66.40	1.60	31.00	*****	15	9.38	18	11.25	0	
66.40	67.90	1.50	38.30	*****	13	8.67	17	11.33	0	
67.90	69.40	1.50	39.30	*****	18	12.00	18	12.00	0	
69.40	70.90	1.50	22.00	*****	12	8.00	22	14.67	0	
70.90	72.40	1.50	55.70	*****	12	8.00	24	16.00	0	
72.40	73.90	1.50	73.30	*****	13	8.67	30	20.00	0	
73.90	75.40	1.50	0.00	0.0	27	18.00	27	18.00	0	
75.40	76.20	0.80	0.00	0.0	13	16.25	10	12.50	0	
76.20	77.70	1.50	0.00	0.0	24	16.00	20	13.33	0	
77.70	78.90	1.20	16.70	*****	16	13.33	24	20.00	0	
78.90	79.40	0.50	0.00	0.0	8	16.00	18	36.00	0	
79.40	80.70	1.30	20.00	*****	21	16.15	40	30.77	0	
80.70	81.30	0.60	33.30	*****	5	8.33	18	30.00	0	

From (m)	To (m)	Length (L)	Sum Of Length S>= 0.00cm	RQD S/LX100	Number Of Fracturs	Fracturs Per Metres	Number Of Veins	Veins Per Metres	Angle	Comments
81.30	82.00	0.70	28.60	*****	8	11.43	16	22.86	0	
82.00	82.80	0.80	67.50	*****	4	5.00	13	16.25	0	
82.80	83.40	0.60	33.30	*****	10	16.67	18	30.00	0	
83.40	83.80	0.40	0.00	0.0	4	10.00	10	25.00	0	
83.80	85.30	1.50	16.70	*****	15	10.00	27	18.00	0	
85.30	86.30	1.00	29.00	*****	15	15.00	18	18.00	0	
86.30	87.30	1.00	0.00	0.0	14	14.00	22	22.00	0	
87.30	87.80	0.50	0.00	0.0	13	26.00	19	38.00	0	
87.80	88.60	0.80	0.00	0.0	11	13.75	10	12.50	0	
88.60	89.60	1.00	42.50	*****	15	15.00	26	26.00	0	
89.60	91.00	1.40	0.00	0.0	24	17.14	23	16.43	0	
91.00	91.80	0.80	607.00	*****	8	10.00	22	27.50	0	
91.80	93.00	1.20	0.00	0.0	24	20.00	21	17.50	0	
93.00	95.10	2.10	0.00	0.0	12	5.71	8	3.81	0	
95.10	95.70	0.60	41.70	*****	13	21.67	24	40.00	0	
95.70	96.30	0.60	0.00	0.0	10	16.67	13	21.67	0	
96.30	97.10	0.80	25.00	*****	13	16.25	20	25.00	0	
97.10	98.00	0.90	22.20	*****	31	34.44	20	22.22	0	
98.00	99.50	1.50	15.30	*****	27	18.00	18	12.00	0	
99.50	101.00	1.50	0.00	0.0	35	23.33	16	10.67	0	
102.50	104.00	1.50	0.00	0.0	0	0.00	0	0.00	0	
106.10	107.60	1.50	0.00	0.0	44	29.33	21	14.00	0	
112.00	113.50	1.50	73.30	*****	8	5.33	12	8.00	0	
113.50	115.20	1.70	23.50	*****	18	10.59	21	12.35	0	
115.20	115.70	0.50	42.00	*****	3	6.00	9	18.00	0	
115.70	117.40	1.70	0.00	0.0	19	11.18	28	16.47	0	
119.20	120.20	1.00	83.00	*****	4	4.00	6	6.00	0	
149.00	151.80	2.80	0.00	0.0	9	3.21	1	0.36	0	
151.80	153.90	2.10	26.70	*****	38	18.10	4	1.90	0	

HOLE NUMBER: WF-92-09

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: WOLF92
PROJECT NUMBER: 673
CLAIM NUMBER:
LOCATION: LOOKOUT ZONE

PLOTTING COORDS GRID: I.P. GRID
NORTH: 97300.00N
EAST: 36185.00E
ELEV: 1274.00

ALTERNATE COORDS GRID: I.P. GRID
NORTH: 973+ 0N
EAST: 361+85E
ELEV: 1274.00

COLLAR DIP: -50° 0' 0"
LENGTH OF THE HOLE: 155.45m
START DEPTH: 0.00m
FINAL DEPTH: 155.45m

COLLAR GRID AZIMUTH: 90° 0' 0"

COLLAR ASTRONOMIC AZIMUTH: 90° 0' 0"

DATE STARTED: August 19, 1992
DATE COMPLETED: August 21, 1992
DATE LOGGED: August 21, 1992

COLLAR SURVEY: NO
MULTISHOT SURVEY: NO
RQD LOG: YES

PULSE EM SURVEY: NO
PLUGGED: NO
HOLE SIZE: NQ

CONTRACTOR: ATLAS DRILLING LTD.
CASING: REAMED 1.5
CORE STORAGE: CAMP

PURPOSE: TO TEST LOOKOUT ZONE ANOMALY

DIRECTIONAL DATA:

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
6.10	-	-48° 0'	ACID	ok	
90.20	-	-47° 0'	ACID	OK	
154.20	-	-46° 0'	ACID	OK	

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
-	-	-	-	-	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 1.50	«CASING»					
1.50 TO 134.00	«B PORPHYRY »	Colour: Purple, Maroon Grey. Grain Size: M.g.-c.g. Description: As for hole WF-92-08 The interval consists of purple/maroon medium to coarse grained quartz feldspar porphyritic tuff or intrusive. Feldspars are euhedral to anhedral, commonly broken, less commonly zoned. Angular lapilli sized fragments are seen locally. Quartz xtals are generally 1mm or less, subhedral, smokey grey to black, 1-2%. Small (20-40cm) zones of coarse grained feldspar porphyry in dark black aphanitic matrix. These are often weakly to moderately magnetic. Other small (10-20cm) zones of bladed quartz veining are also seen. Metre scale pervasive silicification is present locally. Vuggy quartz cavities present thoughout. ┤1.5-4.5├ ┤4.5-5.4├ 5.0 Fault gouge 5.4-6.4 ┤6.4-7.0├ 7.0-7.8 Limonite bx veinlets Core is rubbly and broken with pyritic/limonitic coatings along fractures. ┤9.1-9.6├ From 9.1-9.15 is brecciated banded vein 9.6-9.8 «Fault Gouge» 10.5-10.7 10.9-11.3 Coarse feldspar porph 12.2-12.8 Coarse feldspar porph 12.8-15.2 ┤15.2-17.4├ @17.9 Gas phase bx @18.2 3cm wide bladed quartz vein ┤18.7-21.6├ «coarse fspar porph» Dark purple to black 21.6-22.9 ┤21.6-25.4├ 22.9-23.2	90 90	«m chl, w sil» «m-s sil» «w sil» «m sil» «w-m lim» «m-s sil» «stkwrk sil» «w Mt» «w Mt, tr grn pyroph?» «w sil, w chl» Minor qtz veinlets cross-cut interval «w-m sil» «hem, Mt, w sil» Interval cut by small (<10cm) bladed hydrothermal veins and silica stockwork wk to mod discrete zones of alt seen «m sil» «m-s sil»	«tr pyrolusite/psilomelane?» «pyrolusite/psilomelane» «tr pyro/psilomelane» Occurs with quartz veinlets as acicular minerals extending into wallrock «tr-1% pyro/psilo»	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		23.2-25.4		«w-m sil»		
		Minor open fractures lined with silica. Occasional banded veins.		«m-s sil»	«tr pyro/psilo»	
		25.4-26.4		«s sil, m lim»		
				Banded veinlets, minor bladed textures		
		@30.3 Flt gouge				
		@33.3 Flt gouge				
		26.4-34.0 Within 33.3-33.4 bladed quartz + pyro/psilo vein		«m-s sil, m-s lim»	«tr Py, pyro/psilo»	
		34.0-34.5		«s-i sil»		
		34.5-35.1		«s sil, w-m lim»	«tr-1% Py, pyro/psilo»	
		35.1-37.1		«w-m sil»	«tr Py»	
		37.1-37.3 ⎨34.0-37.3⎬		«s sil»	«tr pyro/psilo» along fractures	
		⎨37.8-38.4⎬		«bladed sil»		
		⎨39.2-40.4⎬	70	«s-i sil, blading»		
				Bladed		
		40.4-41.9 «s stockwork»		«s sil»	«tr pyro/psilo»	
		Bottom contact is sharp	60	stockwork banded silicification		
		41.9-43.0		«m-s sil»		
		43.0-43.8		«s sil»	«pyro/psilo»	
		43.8-44.1 ⎨41.9-44.1⎬ «m stwk»		«m-s sil»		
		44.1-45.3		«m chl, w-m sil»	«tr f.g. Py»	
		45.3-48.5		«m-s lim, w-m sil»		
		50.1-51.7 ⎨50.1-65.5⎬		«m-s sil»	«pyro/psilo» abundant dendritic manganiferous oxide coatings	
		51.7-54.6		«m-s sil, m lim»		
		54.6-54.8 Minor vein				
		54.8-55.8		«m-s sil, m lim»		
		55.8-56.0 Minor banded veinlets				
		56.0-57.4		«m-s sil, m lim»		
		57.4-57.6 Minor jigsaw breccia		«s sil»	«m pyro/psilo»	
		57.6-58.3		«m sil, w-m lim»		
		58.3-62.8		«m-s sil, w-m chl»	«tr f.g. Py»	
		⎨62.8-63.7⎬ «coarse feldspar porph»		«w-m chl. Mt, sil»		
		63.7-65.5		«m-s sil, w-m chl»	«tr Py»	
				Minor quartz stockwork		
		65.5-71.1		«m-s sil, m lim»	«tr pyro/psilo»	
				Minor banded veinlets		
		71.1-72.8 ⎨71.1-74.3⎬		«s-i sil, w-m chl»	«tr Py, pyro/psilo»	
				Chlorite occurs as veinlets	Occurs disseminated with chl veinlets	
		72.8-74.3		«s sil, m chl»	«tr Py»	
		74.3-74.5 «Chl Py vein»	60	«s chl»	«10% f.g. Py»	
		74.5-76.2				
		76.2-77.8		«m sil, m lim»	«tr pyro/psilo»	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		⌊77.8-80.2⌋ «coarse feldspar porphry» 80.2-81.0 ⌊81.0-90.4⌋ ⌊90.4-93.8⌋		«m-s sil, m chl, w-m Mt» «m-s lim» «w-m sil, w chl, ser» Minor banded qtz veins and vuggy cavities «m arg, w-m sil, w lim» Feldspars altered to clays, minor silicification, banded veinlets, and bladed textures.	«tr Py» «tr pyro/psilo» «tr Py»	
134.00 TO 136.00	«HYD BX»	Consists of fragments grey, cream and brown silica (vein material?) in a cream silica matrix. Bottom contact is faulted	50	«i-x sil, w hem»	Minor black manganese coatings on fractures.	Core badly broken.
136.00 TO 139.10	«FAULT BX»	Grey Green. Brecciated, angular to sub rounded, fine grained sediments clasts ina grey gougy matrix.				
139.10 TO 151.20	«SILTSTONE»	Grey-maroon. Interbedded grey and reddish siltstones and fine grained black mudstone. Mudstones are finely laminated. Soft sediment structures noted. Bedding orientations highly variable - folding? Bedding @ 174.5m	34			
151.20 TO 152.70	«SST/CONG.»	Interbedded coarse matrix supported conglomerates and sandstones. Fragments of rhyolite, argillite granite and snadstone noted. Clasts vary from a few mm to tens of cm.				
152.70 TO 154.50	«TUFFACEOUS SST»	Grey Green. A fine grained volcaniclastic sandstone. Feldspar crystals and possible vitric shards noted.		«w-m ser» Apple green sericite alteration of glassy material.	«tr Py»	
154.50 TO 155.45	«HETEROLITHIC BRECCIA 2»	Grey green. Heterolithic, angular to sub rounded clasts varying in size from a few mm to several cm . It is clast supported.		«w-m ser»		

Sample	From (m)	To (m)	Length (m)	ASSAYS Ag ppm	GEOCHEMICAL As ppm	Ba ppm	Cu ppm	Fe %	Pb ppm	Sb ppm	Zn ppm	Au ppb	Hg ppb	S %	Aug/t g/t		COMMENTS
39898	4.50	5.40	0.90	0.9	39	21	1	0.74	9	1	48	12	60	0.07			
39899	6.40	7.00	0.60	0.2	30	19	3	0.78	11	1	72	10	50	0.02			
39900	7.00	7.80	0.80	0.1	16	45	5	1.43	14	1	102	32	55	0.04			
39901	8.60	9.60	1.00	0.8	12	37	3	1.07	12	1	105	110	40	0.01			
39902	10.20	11.30	1.10	0.6	26	29	4	1.28	11	1	116	38	35	0.01			
39903	15.20	16.70	1.50	0.5	29	52	4	1.59	12	1	102	25	55	0.02			
39904	16.70	18.20	1.50	0.1	11	19	2	1.15	10	1	90	14	50	0.03			
39905	19.10	20.10	1.00	0.1	33	59	3	2.05	9	1	144	23	45	0.01			
39906	25.40	27.00	1.60	0.1	23	16	3	1.22	10	1	79	32	40	0.02			
39907	27.50	27.90	0.40	0.1	17	14	2	1.36	10	1	99	19	35	0.07			
36618	27.90	31.50	3.60														
39908	31.50	33.00	1.50	0.1	12	21	2	1.44	9	1	115	54	40	0.08			
39909	33.00	33.50	0.50	0.5	20	19	3	1.96	7	1	94	459	35	0.03			
39955	33.50	35.00	1.50	0.2	20	23	6	1.16	7	1	97	18	65	0.07			
36619	35.00	37.70	2.70														
39910	37.70	39.20	1.50	2.2	22	17	9	1.26	10	1	134	125	40	0.04			
39911	39.20	40.40	1.20	1.2	24	14	3	0.67	5	1	42	180	30	0.01			
39912	40.40	41.90	1.50	0.2	21	20	5	1.15	9	1	90	122	45	0.02			
39913	41.90	43.00	1.10	0.5	30	12	2	0.93	8	1	100	74	25	0.15			
39914	43.00	43.80	0.80	0.1	25	15	2	1.75	10	1	92	29	35	0.05			
39915	43.80	44.10	0.30	0.1	14	14	4	1.54	8	1	63	307	35	0.04			
36620	44.10	47.10	3.00														
36621	47.10	51.70	4.60														
39916	51.70	53.20	1.50	0.1	9	26	6	1.31	5	1	127	14	45	0.02			
36622	53.20	56.70	3.50														
39917	56.70	57.60	0.90	0.1	9	33	5	1.56	9	1	113	26	40	0.06			
39918	60.10	61.00	0.90	0.1	9	13	2	1.44	13	1	85	7	25	0.09			
39920	61.90	62.80	0.90	0.2	19	15	2	0.94	7	1	69	17	35	0.03			
39919	65.30	66.80	1.50	0.3	27	22	4	1.17	9	1	94	24	40	0.02			
39920	66.80	67.70	0.90	0.2	19	15	2	0.94	7	1	69	17	35				
39921	67.70	68.20	0.50	0.1	28	22	3	1.6	11	1	97	16	30	0.04			
39922	69.60	71.10	1.50	0.1	9	18	4	0.96	11	1	89	14	20	0.02			
39923	71.10	72.80	1.70	0.1	21	19	4	1.43	5	1	64	14	25	0.46			
39924	72.80	74.30	1.50	0.1	22	20	3	1.08	10	1	99	10	30	0.35			
39925	74.30	74.60	0.30	0.2	51	18	4	2.79	9	1	113	35	35	1.32			
39926	76.20	77.80	1.60	0.1	11	21	3	2	11	1	104	13	30	0.04			
39927	90.40	91.90	1.50	0.3	12	17	2	0.95	5	1	61	8	50	0.02			
39928	91.90	93.40	1.50	0.1	9	22	3	1.26	6	1	89	12	70	0.02			

Sample	From (m)	To (m)	Length (m)	Ag ppm	As ppm	Ba ppm	Cu ppm	Fe %	Pb ppm	Sb ppm	Zn ppm	Au ppb	Hg ppb	S %	Aug/t g/t
39929	93.40	94.90	1.50	0.1	7	24	2	0.95	9	1	71	5	55	0.04	
39930	94.90	95.30	0.40	0.7	29	16	2	0.91	6	1	62	19	35	0.2	
39931	96.80	97.10	0.30	0.4	27	26	2	1.84	11	1	65	49	55	0.09	
39932	101.30	102.80	1.50	0.2	13	14	2	0.72	6	1	30	8	55	0.05	
39933	103.20	105.20	2.00	32.8	21	21	2	1.15	8	1	70	1070	35	0.02	1.33
39934	106.40	108.20	1.80	0.1	5	27	3	1.73	8	1	136	41	40	0.02	
39935	110.00	111.40	1.40	1.5	15	24	3	0.84	7	1	66	32	40	0.02	
39936	111.40	112.90	1.50	1.7	18	19	2	1.05	6	1	66	82	45	0.04	
39937	112.90	114.40	1.50	0.6	13	21	1	0.92	5	1	47	26	20	0.01	
39938	116.10	116.80	0.70	0.6	15	17	1	1.19	5	1	76	298	45	0.08	
39939	117.70	118.40	0.70	1.7	21	19	6	1.73	2	1	63	31	35	0.04	
39940	121.00	122.50	1.50	3.6	1	52	9	1.36	7	1	145	74	55	0.03	
39941	122.50	122.90	0.40	2.7	26	25	4	1.51	7	1	105	49	45	0.07	
39942	122.90	124.60	1.70	1.2	20	23	2	1.42	3	1	111	31	35	0.04	
39943	124.60	125.00	0.40	0.5	27	20	2	1.04	3	1	71	58	25	0.02	
39944	125.00	125.40	0.40	1	23	19	1	0.57	5	1	57	95	35	0.03	
39945	125.40	125.70	0.30	0.7	68	16	2	2.4	5	1	88	109	30	0.02	
39946	125.70	126.40	0.70	1.1	24	19	2	0.65	6	1	66	26	45	0.06	
39947	126.40	127.10	0.70	2	35	19	3	0.88	5	1	44	29	65	0.01	
39948	127.10	128.60	1.50	1.6	32	20	2	0.7	7	1	69	39	55	0.03	
39949	128.60	129.90	1.30	2.9	36	30	4	1.28	10	1	95	196	65	0.04	
39950	129.90	130.80	0.90	7.4	1	94	10	1.18	17	1	149	186	75	0.01	
39951	130.80	132.20	1.40	2.9	23	24	4	0.88	6	1	103	106	70	0.01	
39952	132.20	132.50	0.30	27.8	1	216	13	1.08	33	1	183	243	60	0.02	
39953	132.50	134.00	1.50	3.7	20	26	4	0.81	5	1	89	107	55	0.02	
39954	134.00	136.00	2.00	10.3	17	76	6	1.16	5	1	42	1130	55	0.04	1.13

From (m)	To (m)	Length (L)	Sum Of Length S>= 0.00cm	RQD S/LX100	Number Of Fracturs	Fracturs Per Metres	Number Of Veins	Veins Per Metres	Angle	Comments
4.50	5.40	0.90	0.00	0.0	30	33.33	4	4.44	0	
6.40	7.00	0.60	0.00	0.0	8	13.33	7	11.67	0	
7.00	7.80	0.80	0.00	0.0	22	27.50	2	2.50	0	
8.60	9.60	1.00	0.00	0.0	13	13.00	11	11.00	0	
10.20	11.30	1.10	0.00	0.0	18	16.36	21	19.09	0	
15.20	16.70	1.50	0.00	0.0	39	26.00	19	12.67	0	
16.70	18.20	1.50	0.00	0.0	33	22.00	7	4.67	0	
19.10	20.10	1.00	0.00	0.0	14	14.00	16	16.00	0	
25.40	27.00	1.60	18.10	*****	24	15.00	19	11.87	0	
31.50	33.00	1.50	0.00	0.0	28	18.67	10	6.67	0	
33.00	33.50	0.50	0.00	0.0	8	16.00	5	10.00	0	
33.50	35.00	1.50	13.30	886.7	20	13.33	11	7.33	0	
37.70	39.20	1.50	0.00	0.0	31	20.67	16	10.67	0	
39.20	40.40	1.20	25.00	*****	9	7.50	2	1.67	0	
40.40	41.90	1.50	18.00	*****	23	15.33	34	22.67	0	
41.90	43.00	1.10	0.00	0.0	22	20.00	3	2.73	0	
43.00	43.80	0.80	25.00	*****	10	12.50	18	22.50	0	
51.70	53.20	1.50	0.00	0.0	24	16.00	19	12.67	0	
56.70	57.60	0.90	22.20	*****	1	1.11	16	17.78	0	
60.10	61.00	0.90	26.70	*****	11	12.22	11	12.22	0	
65.30	66.80	1.50	0.00	0.0	26	17.33	37	24.67	0	
66.80	67.70	0.90	0.00	0.0	18	20.00	11	12.22	0	
67.70	68.20	0.50	0.00	0.0	6	12.00	9	18.00	0	
69.60	71.10	1.50	27.30	*****	21	14.00	34	22.67	0	
71.10	72.80	1.70	45.30	*****	17	10.00	6	3.53	0	
72.80	74.30	1.50	0.00	0.0	21	14.00	0	0.00	0	
74.30	74.60	0.30	0.00	0.0	5	16.67	7	23.33	0	
76.20	77.80	1.60	0.00	0.0	35	21.87	38	23.75	0	
90.40	91.90	1.50	0.00	0.0	39	26.00	29	19.33	0	
91.90	93.40	1.50	0.00	0.0	61	40.67	8	5.33	0	
93.40	94.90	1.50	14.70	980.0	28	18.67	11	7.33	0	
94.90	95.30	0.40	47.50	*****	3	7.50	10	25.00	0	
96.80	97.10	0.30	0.00	0.0	2	6.67	5	16.67	0	
101.30	102.80	1.50	0.00	0.0	23	15.33	18	12.00	0	
103.20	105.20	2.00	25.80	*****	41	20.50	15	7.50	0	
106.40	108.20	1.80	14.10	783.3	26	14.44	32	17.78	0	
110.00	111.40	1.40	0.00	0.0	74	52.86	11	7.86	0	
111.40	112.90	1.50	71.00	*****	18	12.00	25	16.67	0	
112.90	114.40	1.50	45.30	*****	17	11.33	32	21.33	0	
116.10	116.80	0.70	0.00	0.0	10	14.29	16	22.86	0	
117.70	118.40	0.70	0.00	0.0	11	15.71	24	34.29	0	
121.00	122.50	1.50	0.00	0.0	48	32.00	25	16.67	0	
122.50	122.90	0.40	0.00	0.0	7	17.50	7	17.50	0	
122.90	124.60	1.70	28.20	*****	30	17.65	13	7.65	0	

From (m)	To (m)	Length (L)	Sum Of Length S>= 0.00cm	RQD S/LX100	Number Of Fracturs	Fracturs Per Metres	Number Of Veins	Veins Per Metres	Angle	Comments
124.60	125.00	0.40	0.00	0.0	5	12.50	5	12.50	0	
125.00	125.40	0.40	0.00	0.0	12	30.00	16	40.00	0	
125.40	125.70	0.30	0.00	0.0	10	33.33	4	13.33	0	
125.70	126.40	0.70	65.70	*****	30	42.86	6	8.57	0	
126.40	127.10	0.70	0.00	0.0	22	31.43	5	7.14	0	
127.10	128.60	1.50	0.00	0.0	62	41.33	21	14.00	0	
128.60	129.90	1.30	15.40	*****	28	21.54	16	12.31	0	
129.90	130.80	0.90	0.00	0.0	53	58.89	19	21.11	0	
130.80	132.20	1.40	0.00	0.0	42	30.00	34	24.29	0	
132.20	132.50	0.30	0.00	0.0	16	53.33	2	6.67	0	
132.50	134.00	1.50	0.00	0.0	100	66.67	33	22.00	0	
134.00	136.00	2.00	0.00	0.0	100	50.00	13	6.50	0	
138.00	140.00	2.00	0.00	0.0	0	0.00	0	0.00	0	

HOLE NUMBER: WF-92-10

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: WOLF92
PROJECT NUMBER: 673
CLAIM NUMBER:
LOCATION: LOOKOUT ZONE

PLOTTING COORDS GRID: I.P. GRID
NORTH: 97400.00N
EAST: 36250.00E
ELEV: 1262.00

ALTERNATE COORDS GRID: I.P. GRID
NORTH: 974+ 0N
EAST: 362+50E
ELEV: 1262.00

COLLAR DIP: -55° 0' 0"
LENGTH OF THE HOLE: 105.50m
START DEPTH: 0.00m
FINAL DEPTH: 105.50m

COLLAR GRID AZIMUTH: 90° 0' 0"

COLLAR ASTRONOMIC AZIMUTH: 90° 0' 0"

DATE STARTED: August 21, 1992
DATE COMPLETED: August 22, 1992
DATE LOGGED: August 24, 1992

COLLAR SURVEY: NO
MULTISHOT SURVEY: NO
RQD LOG: YES

PULSE EM SURVEY: NO
PLUGGED: NO
HOLE SIZE: NQ

CONTRACTOR: ATLAS DRILLING LTD
CASING: REAMED 2.1 METRES
CORE STORAGE: CAMP

PURPOSE: To test hydrothermal breccia intersected in holes WF-92-07 and WF-92-08.

DIRECTIONAL DATA:

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
42.70	-	-54° 0'	ACID	ok	
62.80	-	-54° 0'	ACID	OK	
105.50	-	-50° 0'	ACID	OK	

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
-	-	-	-	-	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 2.10	«CASING»					
2.10 TO 27.90	«B PORPHYRY	Colour: purple to grey				
TO 29.40	»	Grain Size: m.gr. As for holes WF9207,-08, -9 Medium grained purple to grey qtz feldspar crystal porphyry. Consists of rare euhedral commonly broken feldspar crystals to 1 cm (ave. 3-5 mm) in fine grained purple fsp rich matrix. <1%, 1-2 mm smokey qtz grains. Lithic fragments (rhyolite and fsp intrusive) are subangular up to 2 cm dimension. These are rare. Core is variably silicified, oxidized, pyritized throughout. Zones of hydrothermal veining and brecciation up to .5 m are seen locally.				
				¦2.1-7.92¦ «wk sil» -minor banded sil veinlets cross-cut core as stockwork	¦2.1-7.92¦ «tr v.f.gr. diss py»	
		¦7.92-8.5¦ «med-str stockwork»		¦7.92-8.5¦ «med.-str. sil»	¦7.92-8.5¦ «tr-1% f.gr. py»	
		8.5-10.3 -colour: grey-reddish brown -very weak stockwork veinlets		¦8.5-10.3¦ «med.-str. lim»	¦8.5-10.3¦ «tr-1% u.f.gr. py» -occurs as fine interstitial dusting throughout	
		10.3-11.1 -pervasive silica flooding		¦10.3-11.1¦ «str. sil»	¦10.3-11.1¦ «2-3% f.gr. py»	
		11.1-12.2 -minor stockwork veinlets		¦11.1-12.2¦ «med.-str. lim»		
		¦12.2-13.1¦ «med. stockwork» -small banded silica veinlets from 12.9-13.1 bladed quartz vein		¦12.2-13.1¦ «med sil»		
		13.1-15.9 -from 15.2-15.3 small creamy white/brown qtz vein	64	¦13.1-15.9¦ «wk.-med. sil»		

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		15.9-17.1 -broken, fractured core		ǂ15.9-17.1ǂ «med.-str. lim»	ǂ15.9-17.1ǂ «tr. py»	
		ǂ17.1-17.5ǂ «wk. stockwork» -banded silica veins				
		17.5-17.6 -quartz vein breccia	60			
		ǂ17.8ǂ «flt. gouge»	26			
		ǂ18.8ǂ «flt. gouge»				
		ǂ21.4-23.3ǂ «med. stwrk» -stockwork qtz veins @ 22.4 small vein bx fragments heal by creamy white silicilication @ 23.2 3 cm baded ?? overprinted by silica	54	ǂ17.8-21.4ǂ «wk. sil» ǂ21.4-23.3ǂ «w-m sil, w-arg, w-lim» -sil does not pervade wall fsp clay altered. Fe-oxidation occurs along fractures. Soft pinkish mineral lines some stockwork fractures, possibly rhodocrosite or aluminite	ǂ21.4-23.3ǂ «tr py»	
		23.3-25.4 -minor stockwork, core is fractured throughout. Limonite alteration is generally associated with fractures pervading wallrock		ǂ23.3-25.4ǂ «m-s lim»		
		25.4-26.2 -possible fault gouge @ 25.4 and 26.2		ǂ25.4-26.2ǂ «m alunite?» -soft pink clay mineral associated with fracturing and as veinlets		
		26.2-27.7 -minor stockworking. Unit contains large lapilli fragments of rhyolite. Soft greenish creamy mineral, possibly alunite forms veinlets from 27.3-27.4		ǂ26.2-27.7ǂ «w-lim, tr-alunite, w-sil»		
				ǂ27.7-29.4ǂ «m-s sil» -minor clay and limonite	ǂ27.7-29.4ǂ «tr-2% f.gr. py»	
27.90 TO 30.30	«QFP RHYOLITE»	Colour: buff grey to pinkish Grain Size: f.gr. and m.gr. Buff grey with pinkish tint qfp rhyolite in f.gr. to v.f.gr. groundmass. Two types of qtz grains, smokey qtz and clear white qtz forming subhedral grains. Soft greasy apple green mineral occurs in some cavities, possibly celadonite? -bottom contact @ 30.3m	30	«w-lim, w-sil»	«tr py» -also, minor f.gr. black mineral locally	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
30.30 TO 30.60	«RHY TUFF BX»	Colour: grey Grain Size: var. Large, quartz eye rhyolite fragments in f.gr. glassy pyritic matrix. Welding fabric moderate to strong. Preferred orientation to fragments. Occasional armoured lapilli sized fragments	30		«2-3% v.f.gr. py» -occurs as light dusting through matrix	
30.60 TO 31.30	«FLOW BANDED RHYOLITE»	Colour: brown-grey Grain Size: f.gr. Convoluted contorted flow banded rhyolite. Alternating light and dark bands. Contains 3-5%, 2-3 mm euhedral qtz grains, subhedral fsp grains. Bottom 10 cm contains spalled fragments of rhyolite with alteration rims, possibly devitrification textures -contact @	44		«tr. f.gr. py»	
31.30 TO 39.60	«AUTOCLASTIC RHYOLITE BRECCIA»	Colour: grey black Grain Size: var. Angular to subrounded lapilli size fragments in black pyritic glassy matrix. Millimeter scale welded pumice fragments abundant throughout with a common orientation to c.a. Many fragments are rimmed by pyritic halos. Variation in size from mm scale to tens of centimeters. Fragments are predominantly flow banded rhyolite with minor sedimentary clasts ¦34.1-34.5¦ «w stockwork» -former concentrically zoned patterns about frags 38.4-38.5 -quartz vein	30	¦31.3-32.7¦ «w-lim» ¦32.7-33.1¦ «s-lim» ¦34.1-34.5¦ «w-sil» ¦34.9-37.7¦ «tr fluorite/amethyst»	¦31.3-32.7¦ «3-5% v.f.gr. py»	
39.60 TO 41.30	«XTAL LITHIC ASH TUFF»	Colour: grey Grain Size: Heterolithic crystal lithic ash tuff. Fragments are subangular to subrounded argillites, flow banded rhyolite, qtz eye rhyolite in grey to dark grey welded matrix. Some fiamme are present		Minor limonite alteration		

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
				ǂ40.8-41.3ǂ «s-sil»	ǂ40.8-41.3ǂ «tr-2% f.gr. py»	
41.30 TO 52.10	«RHYL LAPILLI TUFFS AND BX»	Colour: grey to grey green Grain Size: m.gr. to f.gr. A complex interval of spherulitic rhyl breccias and bedded lapilli tuff. Some of the wider rhyolite intervals may be large blocks. Clasts of a pre-existing rhyolite fragmental occur at the bottom of the interval. These could be rip-ups. qtz veining ǂ42.4-42.7ǂ «bladed vein» ǂ42.7-43.3ǂ «w-m stkwrk» ǂ43.9-45.5ǂ «stkwrk chl» -very black stockwork veinlets, possibly chl or f.gr. pyrite ǂ45.5-45.8ǂ «tuff Bx» ǂ46.5-47.7ǂ «w-m stkwrk» -banded blade veins 48.2-49.0 -tuff bx		Alteration is mostly weak with narrow zones of bladed and banded quartz veining. ǂ41.3-42.0ǂ «w-lim, w-sil» 45.8-46.5 -m-lim ǂ46.5-47.7ǂ «m-sil» ǂ47.7-48.2ǂ «s-chl» ǂ49.0-51.9ǂ «s-lim»	ǂ47.7-48.2ǂ «tr-1% py»	
52.10 TO 53.40	«RHYL LAPILLI BX»	Colour: grey Grain Size: var. Composed of QFP rhyolite fragments. They are angular to sub-angular and average 1-2cm in diameter. This is likely a continuation of the previous unit. .		Minor silicification		
53.40 TO 58.40	«SPHERULITIC RHYL/RHYL BX»	Colour: grey to grey green Grain Size: f.gr. and m.gr. As for 41.3-52.1 -subhedral to anhedral qtz and fsp crystals in ashy matrix ǂ53.4-54.2ǂ «m-stockwork» -banded qtz vein stockwork		ǂ53.4-54.2ǂ «w-arg, w-lim, m-s sil» ǂ54.2-54.9ǂ «m-s sil»	ǂ54.2-54.9ǂ «tr py»	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		54.9-56.5 -minor blades 57.7-57.8 -chlorite/pyrite vein		ǂ54.9-56.5ǂ «m-sil, m-chl»	ǂ54.9-56.5ǂ «tr py»	
58.40 TO 59.60	«RHYOLITE L APILLI TUFF »	Colour: grey to black Grain Size: var. Interbedded black, glassy matrix tuff breccia and heterolithic tuff. See interval 52.1-53.4		Minor stockwork silification, occasional limonitic fractures	«tr-1% f.gr. py»	
59.60 TO 66.50	«QFP RHYOLI	Colour: grey		«m-sil, w-chl»	«tr py»	
TO 61.10	TE»	As for 41.3-52.1		-pervasive silicification, minor chloritic fractures	-associated with chlorite	
66.50 TO 69.00	«QFP RHYOLI TE/RYBX»	Colour: buff grey Grain Size: f.gr. Coarse grained plag porphyry similar to the B porp hyry but without the dark phase. Contact with the overlying rhyolite is sharp, possibly intrusive. It is also strongly silificied. Porphyry consists of 30-40%, 5-10mm feldspar phenocrysts in a red groundmass. ǂ61.1-62.6ǂ «Qz stockwork» with minor rice crispie breccias.		ǂ61.1-62.6ǂ «m-s sil, w-lim»		
		ǂ63.0-65.8ǂ «s-stockwork» -bladed and banded stockwork veins to 2 cm width		ǂ63.0-64.1ǂ «tr py, electrum??» «m-s sil, w-m lim»		
		64.1-65.8 -minor stockwork, occasional banded, bladed qtz veins		ǂ64.1-65.8ǂ «w-m sil» ǂ65.8-66.1ǂ «s-sil»		
		ǂ66.1-66.8ǂ «-brecciated, silicified»		ǂ66.1-66.8ǂ «i-sil, w-m lim»	ǂ66.1-66.8ǂ «tr py»	
		ǂ66.8-70.2ǂ «s-stockwork» -stockwork silicified and brecciated, bladed silica healed breccia		ǂ66.8-68.3ǂ «s-sil»	ǂ66.8-68.3ǂ «w-pyro/psilo»	
		68.3-70.2		ǂ68.3-70.2ǂ «m-sil»	ǂ68.3-70.2ǂ «tr py»	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		-w-stockwork, minor bladed veins				
70.20 TO 88.00	«STWK+H.BX»	┤70.2-71.5├ «s-stockwork» -stockwork fractured and rehealed		┤70.2-71.5├ «s-sil»	┤70.2-71.5├ «tr py»	
				┤71.5-71.8├ «s-i sil»		
		┤71.8-73.0├ «-w-m stockwork»		┤71.8-73.0├ «m-perv. sil, green ser?»		
		73.0-73.3 bladed, banded qtz vein		┤73.0-73.3├ «i-x sil»	┤73.0-73.3├ «pyro/psilo» -black mineral following blading	
		73.3-75.0 m-s stockwork		┤73.3-75.0├ «m-s sil»	┤73.3-75.0├ «tr pyro/psilo»	
		75.0-75.3 bladed-banded vein -blading is overprinted by silicification		┤75.0-75.3├ «s-i-x sil»	-occurs along fracture surfaces	
		┤75.3-77.0├ «s-i banded stockwork» -stockwork banded and brecciated vein		┤75.3-77.0├ «s-sil»	┤75.3-77.0├ «tr pyrol/psilo»	
		┤77.0-77.8├ «hydrothermal bx-vein» -massive qtz overprint of blading and "rice krispie" bx	54	┤77.0-77.8├ «x-sil, adularia»		
		77.8-78.3 m-s banded stockwork -blue grey banded silica stockwork		┤77.8-78.3├ «m-s sil, s-lim»		
		┤78.3-84.7├ «x-stockwork bx» -mm to cm scale banded veins and "rice krispie" breccias. Some bladed textures -fragments are locally rimmed by alternating light and dark, very fine silica or chalcedonic bands. Estimate at least 80-100 fine bands, truncated by later multiperiodic bladed and banded veins. Darker bands are similar to those seen in surface trenching		┤78.3-84.7├ «s-i sil, adularia» -possible bands of adularia	┤78.3-84.7├ «tr py?»	
		┤84.7-85.8├ «massive, bladed vein bx» Micro brecciated, bladed resilicified white vein, banded locally, blading possibly after barite rather than calcite	50	┤84.7-85.8├ «x-sil, adularia»		
		┤85.8-86.8├ «banded sil» -dark and light coloured banded qtz veins		┤85.8-86.8├ «x-sil»		
		┤86.8-88.0├ «balded vein stockwork»		┤86.8-87.3├ «x-sil, adularia»	┤86.8-87.3├ «tr electrum»	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		-massive bladded veining blades for several cm -lower contact @	40		-at lower contact is dark metallica mineral within banding	
		87.3-88.0 s-stockwork bx -stockwork brecciated and resilicified -lower contact @	60	⟨87.3-88.0⟩ «s-i sil»		
88.00 TO 95.90	«QZ EYE RHY OLITE»	Colour: buff grey Grain Size: f.gr. Similar to qtz eye rhyolite intrusive mapped in trenches Consists of 1-2%, 1 mm euhedral to subhedral qtz eyes in grey buff, f.gr. matrix. Has local pseudo-bx textures defined by fe-oxidation. Minor areas of flow banding are observed Minor to moderate stockwork veinlets and bx's are seen throughout the interval				
		88.0-95.3 w-m stockwork -similar to QXAT in areas		⟨88.0-95.3⟩ «s-lim, s-arg, w-sil»		
		92.9-93.4 m-s stockwork		⟨92.9-93.4⟩ «m-sil»		
		94.0-94.6 jigsaw bx -weak hydrothermal breccia				
		95.4-95.9 hydrothermal breccia				
		-bottom contact @	60			
95.90 TO 98.30	«FAULT»	Colour: black to grey Grain Size: var. Strongly clay altered fault breccia 95.9-96.7 -angular fragments of f.gr. argillaceous seds in black gougy matrix 96.7-97.6 -brecciated fragments appear to be sandy tuffaceous units				
		97.6-98.0 hydrothermal breccia -contained within fault zone		⟨97.6-98.0⟩ «s-sil»		
		gouge fabric @	74			

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		98.0-98.3 -brecciated sediments				
98.30 TO 105.50	«HETEROLITH IC BRECCIA 2» E.O.H.	Colour: grey green Grain Size: var. Matrix supported consists of large rounded granitic frags up to tens of centimeters in dimension as well as volcanic fragments in finer grained matrix		«s-chl, clay pyrophyllite»		

Sample	From (m)	To (m)	Length (m)	ASSAYS Ag ppm	GEOCHEMICAL As ppm	Ba ppm	Cu ppm	Fe %	Pb ppm	Sb ppm	Zn ppm	Au ppb	Hg ppb	S %	Aug/t g/t	COMMENTS
39956	7.90	8.50	0.60	0.3	46	48	12	1.64	11	1	64	24	40	0.26		
39957	8.80	10.30	1.50	0.2	43	30	7	1.19	11	1	68	22	40	0.08		
39958	10.30	11.10	0.80	0.7	65	30	18	1.05	12	1	119	14	50	0.51		
39959	12.20	13.11	0.91	3.0	33	23	6	0.86	7	1	63	230	25	0.03		
39960	14.90	15.30	0.40	0.1	63	42	6	1.31	5	1	80	33	40	0.04		
39961	17.10	17.50	0.40	0.9	27	21	7	0.64	5	1	63	124	30	0.04		
39962	17.50	18.50	1.00	0.1	20	68	6	1.15	7	1	86	24	50	0.08		
39963	21.40	23.30	1.90	0.1	20	42	6	1.37	10	1	88	30	45	0.03		
39964	25.40	26.20	0.80	0.1	52	44	7	1.20	8	1	61	37	40	0.03		
39965	27.70	29.70	2.00	0.8	24	15	6	1.00	8	1	59	61	35	0.52		
39966	34.10	34.50	0.40	0.2	21	27	5	1.45	12	1	56	20	30	0.1		
39967	34.50	36.00	1.50	0.2	21	25	4	1.19	10	1	47	31	25	0.07		
39968	36.00	37.00	1.00	0.1	9	20	3	1.18	7	1	75	12	35	0.03		
39969	40.80	41.30	0.50	2.9	22	19	4	0.74	20	1	42	290	35	0.16		
39970	42.40	42.70	0.30	10.9	12	15	5	1.09	20	1	41	3000	55	0.03		
39986	42.70	43.30	0.60	6.0	14	26	5	0.88	17	1	81	1260	75	0.2		
39987	43.30	43.90	0.60	6.6	29	12	3	0.85	21	1	84	356	70	0.56		
39988	43.90	45.40	1.50	1.3	15	15	3	0.75	13	1	69	364	90	0.4		
39989	45.40	46.00	0.60	0.7	20	18	3	0.99	14	1	55	85	60	0.3		
39990	46.00	46.50	0.50	0.4	24	13	2	1.05	11	1	33	50	40	0.2		
39971	46.50	47.70	1.20	1.2	11	23	4	0.98	17	1	58	62	35	0.18		
39972	47.70	48.00	0.30	0.9	22	12	5	1.55	19	1	114	257	35	0.7		
39973	53.40	54.20	0.80	1.5	18	17	4	0.76	140	1	42	24	25	0.02		
39974	54.20	54.90	0.70	2.8	6	34	5	1.47	309	1	80	26	40	0.1		
39975	54.90	56.50	1.60	1.8	14	13	3	0.77	122	1	41	12	25	0.23		
39976	59.60	61.10	1.50	1.9	12	12	4	0.73	44	1	46	124	20	0.3		
39977	61.10	62.60	1.50	1.8	11	20	3	0.70	16	1	41	105	30	0.04		
39978	62.60	63.00	0.40	1.0	11	14	3	0.62	16	1	31	134	25	0.03		
39979	63.00	64.10	1.10	1.5	13	12	3	0.60	11	1	33	38	35	0.03		
39980	64.10	66.10	2.00	1.0	12	17	6	0.67	30	1	47	79	35	0.05		
39981	66.10	66.80	0.70	4.7	25	23	9	0.88	32	1	44	88	50	0.11		
39982	66.80	68.30	1.50	5.6	1	104	6	0.74	17	1	67	89	60	0.07		
39983	68.30	69.80	1.50	2.2	1	55	5	0.70	7	1	66	60	60	0.04		
39984	69.80	70.20	0.40	2.3	4	36	4	0.77	9	1	68	78	75	0.03		
39985	70.20	71.80	1.60	4.2	9	41	4	0.84	10	1	61	510	50	0.06		
39991	71.80	73.00	1.20	10.8	5	61	5	1.22	13	1	95	703	75	0.06		
39992	73.00	73.30	0.30	7.9	11	63	8	1.29	12	1	90	370	45	0.04		
39993	73.30	75.00	1.70	5.3	11	47	4	0.72	4	1	54	473	75	0.03		

Sample	From (m)	To (m)	Length (m)	Ag ppm	As ppm	Ba ppm	Cu ppm	Fe %	Pb ppm	Sb ppm	Zn ppm	Au ppb	Hg ppb	S %	Aug/t g/t
39994	75.00	75.50	0.50	6.3	8	19	4	0.40	5	1	23	966	40	0.04	
39995	75.50	77.00	1.50	5.5	9	41	4	0.51	7	1	36	635	55	0.05	
39996	77.00	77.80	0.80	4.0	14	41	5	0.39	5	1	21	722	75	0.03	
39997	77.80	78.30	0.50	75.7	106	56	23	1.88	65	1	89	930	45	0.19	
39998	78.30	79.80	1.50	6.6	14	29	5	0.46	6	1	37	585	40	0.04	
39999	79.80	81.30	1.50	4.9	15	58	5	0.58	2	1	32	344	50	0.02	
40000	81.30	82.70	1.40	2.7	11	46	4	0.66	6	1	44	142	55	0.03	
40501	82.70	83.10	0.40	6.7	21	51	1	0.64	12	1	32	373	80	0.01	
40502	83.10	83.80	0.70	5.8	24	35	1	0.59	10	1	38	375	75	0.01	
40503	83.80	84.20	0.40	7.2	18	29	1	0.46	6	1	24	910	70	0.01	1.00
40504	84.20	84.70	0.50	19.8	18	46	1	0.56	11	1	38	1865	70	0.03	1.89
40505	84.70	85.80	1.10	11.9	14	17	1	0.25	5	1	6	1680	65	0.02	1.82
40506	85.80	86.60	0.80	15.9	10	38	1	0.26	7	1	10	3360	50	0.03	4.07
40507	86.60	87.20	0.60	32.4	12	12	1	0.26	4	1	9	5210	70	0.01	6.52
40508	87.20	87.30	0.10	63	16	16	1	0.48	5	1	13	10000	40	0.01	12.70
40509	87.30	88.00	0.70	25.8	15	21	1	0.41	8	1	17	5148	45	0.03	6.79
40510	88.00	89.50	1.50	10.6	52	40	1	0.61	18	1	41	805	60	0.01	0.99
40511	89.50	91.00	1.50	4.9	76	52	1	0.63	18	1	44	505	45	0.04	0.58
40512	91.00	92.90	1.90	3.5	83	44	1	0.68	10	1	44	1340	40	0.03	1.15
40513	92.90	93.40	0.50	1.9	50	29	1	0.57	18	1	35	301	160	0.01	
40514	93.40	94.00	0.60	1.7	60	21	1	0.64	14	1	41	78	115	0.02	
40515	94.00	94.60	0.60	3.5	40	38	1	0.45	10	1	33	902	110	0.01	1.02
40516	94.60	95.40	0.80	2	57	39	1	0.49	14	2	29	151	65	0.03	
40517	95.40	95.90	0.50	4.4	48	297	1	1.24	29	2	73	231	75	0.03	
40518	95.90	97.60	1.70	1.7	47	62	14	1.26	35	1	139	54	85	0.03	
40519	97.60	98.10	0.50	3.1	26	30	1	0.9	9	1	38	371	55	0.03	
40520	98.10	98.30	0.20	1.7	20	49	1	2.39	17	1	59	296	110	0.06	
40521	98.30	99.80	1.50	0.5	11	45	16	2	30	1	195	11	85	0.21	

From (m)	To (m)	Length (L)	Sum Of Length S>= 0.00cm	RQD S/LX100	Number Of Fracturs	Fracturs Per Metres	Number Of Veins	Veins Per Metres	Angle	Comments
7.90	8.50	0.60	11.00	*****	14	23.33	0	0.00	0	
8.50	10.30	1.80	68.00	*****	15	8.33	10	5.56	0	
10.30	11.10	0.80	80.00	*****	1	1.25	3	3.75	0	
12.20	13.10	0.90	31.00	*****	5	5.56	26	28.89	0	
14.90	15.30	0.40	26.00	*****	4	10.00	10	25.00	0	
17.10	17.50	0.40	15.00	*****	4	10.00	10	25.00	0	
17.50	18.50	1.00	38.00	*****	7	7.00	7	7.00	0	
21.40	23.30	1.90	85.00	*****	22	11.58	27	14.21	0	
25.40	26.20	0.80	38.00	*****	8	10.00	10	12.50	0	
27.70	29.70	2.00	92.00	*****	16	8.00	7	3.50	0	
34.10	34.50	0.40	27.00	*****	6	15.00	5	12.50	0	
34.50	36.00	1.50	60.00	*****	14	9.33	7	4.67	0	
36.00	37.00	1.00	120.00	*****	12	12.00	7	7.00	0	
40.80	41.30	0.50	25.00	*****	4	8.00	2	4.00	0	
42.40	42.70	0.30	13.00	*****	1	3.33	1	3.33	0	
42.70	43.30	0.60	33.00	*****	5	8.33	21	35.00	0	
43.30	43.90	0.60	81.00	*****	2	3.33	23	38.33	0	
43.90	45.40	1.50	53.00	*****	9	6.00	20	13.33	0	
45.40	46.00	0.60	0.00	0.0	7	11.67	16	26.67	0	
46.00	46.50	0.50	0.00	0.0	19	38.00	11	22.00	0	
46.50	47.70	1.20	77.00	*****	10	8.33	23	19.17	0	
47.70	48.00	0.30	30.00	*****	1	3.33	6	20.00	0	
53.40	54.20	0.80	57.00	*****	3	3.75	10	12.50	0	
54.20	54.90	0.70	23.00	*****	6	8.57	7	10.00	0	
54.90	56.50	1.60	155.00	*****	10	6.25	17	10.62	0	
59.60	61.10	1.50	64.70	*****	7	4.67	11	7.33	0	
61.10	62.60	1.50	17.30	*****	14	9.33	14	9.33	0	
62.60	63.00	0.40	0.00	0.0	5	12.50	2	5.00	0	
63.00	64.10	1.10	45.00	*****	8	7.27	19	17.27	0	
64.10	66.10	2.00	33.00	*****	21	10.50	21	10.50	0	
66.10	66.80	0.70	30.00	*****	5	7.14	2	2.86	0	
66.80	68.30	1.50	31.00	*****	16	10.67	10	6.67	0	
68.30	69.80	1.50	17.00	*****	12	8.00	9	6.00	0	
69.80	70.20	0.40	0.00	0.0	3	7.50	3	7.50	0	
70.20	71.80	1.60	13.00	812.5	23	14.37	19	11.87	0	
71.80	73.00	1.20	17.00	*****	25	20.83	37	30.83	0	
73.00	73.30	0.30	0.00	0.0	5	16.67	10	33.33	0	
73.30	75.00	1.70	0.00	0.0	73	42.94	50	29.41	0	
75.00	75.50	0.50	0.00	0.0	3	6.00	4	8.00	0	
75.50	77.00	1.50	0.00	0.0	56	37.33	78	52.00	0	
77.00	77.80	0.80	0.00	0.0	6	7.50	25	31.25	0	
77.80	78.30	0.50	0.00	0.0	15	30.00	7	14.00	0	
78.30	79.80	1.50	15.00	*****	25	16.67	25	16.67	0	
79.80	81.30	1.50	13.00	866.7	22	14.67	26	17.33	0	

From (m)	To (m)	Length (L)	Sum Of Length S>= 0.00cm	RQD S/LX100	Number Of Fracturs	Fracturs Per Metres	Number Of Veins	Veins Per Metres	Angle	Comments
81.30	82.70	1.40	0.00	0.0	34	24.29	29	20.71	0	
82.70	83.10	0.40	0.00	0.0	9	22.50	4	10.00	0	
83.10	83.80	0.70	0.00	0.0	19	27.14	15	21.43	0	
83.80	84.20	0.40	58.00	*****	6	15.00	5	12.50	0	
84.20	84.70	0.50	44.00	*****	7	14.00	7	14.00	0	
84.70	85.80	1.10	53.00	*****	13	11.82	9	8.18	0	
85.80	86.60	0.80	0.00	0.0	19	23.75	36	45.00	0	
86.60	87.20	0.60	46.00	*****	19	31.67	13	21.67	0	
87.20	87.30	0.10	0.00	0.0	2	20.00	2	20.00	0	
87.30	88.00	0.70	0.00	0.0	10	14.29	15	21.43	0	
88.00	89.50	1.50	67.00	*****	13	8.67	46	30.67	0	
89.50	91.00	1.50	13.00	866.7	29	19.33	18	12.00	0	
91.00	92.90	1.90	37.00	*****	41	21.58	18	9.47	0	
92.90	93.40	0.50	44.00	*****	7	14.00	15	30.00	0	
93.40	94.00	0.60	53.00	*****	3	5.00	10	16.67	0	
94.00	94.60	0.60	67.00	*****	6	10.00	2	3.33	0	
94.60	95.40	0.80	28.00	*****	15	18.75	5	6.25	0	
95.40	95.90	0.50	40.00	*****	5	10.00	5	10.00	0	
95.90	97.60	1.70	0.00	0.0	100	58.82	4	2.35	0	
97.60	98.10	0.50	0.00	0.0	11	22.00	5	10.00	0	
98.10	98.30	0.20	0.00	0.0	10	50.00	7	35.00	0	
98.30	99.80	1.50	0.00	0.0	57	38.00	2	1.33	0	

HOLE NUMBER: WF-92-11

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: WOLF92
PROJECT NUMBER: 673
CLAIM NUMBER:
LOCATION: GATE ZONE

PLOTTING COORDS GRID: I.P. GRID
NORTH: 97900.00N
EAST: 36150.00E
ELEV: 1194.00

ALTERNATE COORDS GRID: I.P. GRID
NORTH: 979+ 0N
EAST: 361+50E
ELEV: 1194.00

COLLAR DIP: -50° 0' 0"
LENGTH OF THE HOLE: 135.60m
START DEPTH: 0.00m
FINAL DEPTH: 135.60m

COLLAR GRID AZIMUTH: 270° 0' 0"

COLLAR ASTRONOMIC AZIMUTH: 270° 0' 0"

DATE STARTED: August 22, 1992
DATE COMPLETED: August 24, 1992
DATE LOGGED: August 27, 1992

COLLAR SURVEY: NO
MULTISHOT SURVEY: NO
RQD LOG: YES

PULSE EM SURVEY: NO
PLUGGED: NO
HOLE SIZE: NQ

CONTRACTOR: ATLAS DRILLING LTD
CASING: REAMED TO 3.0M
CORE STORAGE: CAMP

PURPOSE:

DIRECTIONAL DATA:

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
3.10	-	-50° 0'	ACID		NO ETCH
67.40	-	-49° 0'	ACID	OK	
130.76	-	-46° 0'	ACID	OK	
177.70	-	-58° 0'	ACID	OK	

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
-	-	-	-	-	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 3.00	«CASING»					
3.00 TO 13.50	«QXAT»	Colour: light buff grey Grain Size: v.f.gr. Less than 1% subhedral qtz grains in f.gr. ashy matrix. Minor depositional breccia. Rather non-descript. Bottom contact is silicified @	40	-w-lim	«tr py»	
13.50 TO 16.80	«HETEROLITHIC BRECCIA 1»	Colour: grey green Grain Size: var. Subrounded to rounded granitic frags from mm scale to several cm in moderately sorted, mod. consolidated chloritic matrix Bottom contact may be faulted		«m-chl»		
16.80 TO 27.20	«HETEROLITHIC CONGLOMERATE»	Colour; grey green black Grain Size: var. Heterolithic epiclastic debris flow. Poorly sorted subrounded to angular heterolithic frags in dark grey to black to green argillaceous and chloritic matrix. Fragment composition varies from black pyritic argillite to grey sandstone and tuffaceous sediments Size ranges from mm scale to tens of centimeters. No granitic fragments. Minor qtz stringers throughout 18.9-19.0 -small hydrothermal bx 19.8-20.3 h'thermal vein -bladed veining and silicification of matrix 21.2-21.4 bladed vein -2 cm wide vein subparallel to core axis 21.6-22.9 w-stockwork interval of moderately to well sorted material 24.3-24.6 h'thermal bx	10	«m-chl» {16.8-17.9} «s-arg» {18.9-19.0} «m-s sil» {19.8-20.3} «s-sil» {21.2-21.4} «m-sil» {21.6-22.9} «w-m sil» {24.3-24.6} «w-sil»	{24.6-25.2} «10-15% v.f.gr. py»	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		25.2-25.5 fault -graphitic lower contact bedded @	 40	‡25.2-25.5‡ «clay, graphite»	-finely disseminated	
27.20 TO 45.10	«RHY LITHIC LAPILLI TU FF»	Colour: grey pink Grain Size: var. Heterolithic lapilli size fragments in weakly welded, glassy matrix. Welding texture approx. @ Fragments are generally rimmed by glass. Clast compostion of strongly welded tuff, pyritic argillaceous sandstones/siltstones, pumic frags generally flattened bottom contact @	 50 58			Welding texture increases downhole
45.10 TO 135.60	«FELDSPAR Q UARTZ CRYST AL LITHIC T UFF» E.O.H.	Colour: dark grey maroon Grain Size: var. 5-10% broken fsp crystals to 5 mm in dark grey blassy matrix. Weakly welded. Minor armoured crystals, occasional lapilli size welded fragments <1% qtz crystals 60.1-60.5 fault 97.0 fault 105.9-110 -core is very broken, rubbly 117.1 fault gouge		«w-chl» «w-pyroph m-ser» -at small fracture linings	‡3% f.gr. py» -disseminated throughout, occasional py stringers	Welding becomes less apparent downhole Little texture variation downhole Fragments are sediments, welded tuffs and various volcaniclastics

Sample	From (m)	To (m)	Length (m)	ASSAYS Ag ppm	GEOCHEMICAL As ppm	Ba ppm	Cu ppm	Fe %	Pb ppm	Sb ppm	Zn ppm	Au ppb	Hg ppb	S %	Aug/t g/t		COMMENTS
40522	13.40	13.60	0.20	0.6	20	28	1	0.83	11	1	56	10	65	0.09			
40523	16.80	17.90	1.10	0.1	13	44	3	2.2	28	1	204	6	65	0.21			
40524	18.90	19.00	0.10	0.7	24	45	1	1.34	11	1	88	27	40	0.16			
40525	19.80	20.30	0.50	0.5	7	53	19	1.63	8	1	160	85	50	0.19			
40526	21.20	21.40	0.20	0.5	10	52	10	2.15	13	1	156	15	35	0.24			
40527	21.60	22.90	1.30	0.1	5	30	9	1.61	13	1	136	16	45	0.1			
40528	24.30	25.20	0.90	3.1	42	35	9	2.7	19	1	122	44	50	1.8			
40529	50.10	51.60	1.50	0.1	21	12	4	1.41	11	1	95	20	35	0.78			
40530	114.60	115.90	1.30	0.1	1	19	4	1.55	15	1	104	11	45	0.14			
40531	115.90	117.20	1.30	0.1	1	12	4	1.36	13	1	136	12	30	0.11			

Sample	From (m)	To (m)	Length (m)	AL203 %	BAT %	CAO %	FE203 %	K20 %	MGO %	MNO2 %	NA20 %	P205 %	SIO2 %	TIO2 %	S %	TOT (%)	AG PPM	AS PPM	BA PPM	CU PPM	PB PPM	SB PPM	ZN PPM	AU PPB
	0.00	0.00	0.00																					

From (m)	To (m)	Length (L)	Sum Of Length S>= 0.00cm	RQD S/LX100	Number Of Fracturs	Fracturs Per Metres	Number Of Veins	Veins Per Metres	Angle	Comments
13.40	13.60	0.20	0.00	0.0	5	25.00	1	5.00	0	
16.80	17.90	1.10	0.00	0.0	35	31.82	0	0.00	0	
18.90	19.00	0.10	0.00	0.0	3	30.00	3	30.00	0	
19.80	20.30	0.50	42.00	*****	3	6.00	3	6.00	0	
21.20	21.40	0.20	0.00	0.0	6	30.00	3	15.00	0	
21.60	22.90	1.30	37.00	*****	15	11.54	18	13.85	0	
24.30	25.20	0.90	0.00	0.0	12	13.33	5	5.56	0	
50.10	51.60	1.50	45.00	*****	21	14.00	7	4.67	0	
114.60	115.90	1.30	32.00	*****	22	16.92	0	0.00	0	

HOLE NUMBER: WF-92-12

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: WOLF92
PROJECT NUMBER: 673
CLAIM NUMBER:
LOCATION: GATE ZONE

PLOTTING COORDS GRID: I.P. GRID
NORTH: 98100.00N
EAST: 36025.00E
ELEV: 1190.00

ALTERNATE COORDS GRID: I.P. GRID
NORTH: 981+ 0N
EAST: 360+25E
ELEV: 1190.00

COLLAR DIP: -60° 0' 0"
LENGTH OF THE HOLE: 132.90m
START DEPTH: 0.00m
FINAL DEPTH: 132.90m

COLLAR GRID AZIMUTH: 90° 0' 0"

COLLAR ASTRONOMIC AZIMUTH: 90° 0' 0"

DATE STARTED: August 24, 1992
DATE COMPLETED: August 26, 1992
DATE LOGGED: August 27, 1992

COLLAR SURVEY: NO
MULTISHOT SURVEY: NO
RQD LOG: YES

PULSE EM SURVEY: NO
PLUGGED: NO
HOLE SIZE: NQ

CONTRACTOR: ATLAS DRILLING LTD
CASING: REAMED TO 4.9M
CORE STORAGE: CAMP

PURPOSE:

DIRECTIONAL DATA:

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
6.10	-	-61° 0'	ACID	OK	
56.69	-	-61° 0'	ACID	OK	
135.60	-	-61° 0'	ACID	OK	

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
-	-	-	-	-	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 4.90	«CASING»					
4.90 TO 54.20	«FSPAR-QTZ XTAL LITHIC TUFF»	Colour: grey Grain Size: var. See hole WF-92-11 45.1-135.6 -5-10% broken fsp crystals to 5 mm in dark grey tuffaceous matrix. Various lapilli size sub-rounded lithic fragments - rhyolite, minor argillite, tuffaceous sediments 6.0 Flt gouge 7.0 Flt gouge 4.9-12.2 -broken rubbly core -some fragments rimmed by chlorite -very weak welding @ forms cleavage on fractures fractures oriented 40 deg perpendicular to welding fabric 44.5-45.0 flt gouge 47.6 flt gouge 49.2 flt 50.9 flt gouge	40	Occasional graphitic fractures {45.1-135.6} «w-pyroph, m-ser, w-m chl» along fractures {37.5-38.1} «s-chl, s-ser» {44.5-45.0} «i-chl» {50.9-54.2} «m-s ser, pyroph» -slight increase in alteration	{45.1-135.6} «3-5% py» -disseminated throughout	
54.20 TO 67.50	«QTZ TUFFAC EOUS SST»	Colour: tan Grain Size: f.gr. 5% rounded qtz grains in tan coloured, fine fsp, rich, sandy matrix Bedding @	24	«s-arg» -fsp altered to clays		
67.50 TO 74.40	«WELDED XTA L LITHIC TU FF»	Colour: grey Grain Size: f.gr. and m.gr. Strongly welded qtz fsp crystal lithic tuff. Typical convoluted/contorted discontinuous banding. Lithic fragments appear to be sediments (argillite, sandstone), coarse angular	22	«w-m chl, w-ser, w-arg»	«tr py» -generally in chloritic cavities	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		71.9 Flt				
74.40 TO 76.80	«SILTSTONE»	Colour: green Grain Size: f.gr. 74.4-74.5 flt -fine grained, dark green, mafic siltstone, extremely chloritized. Contains darker chlorite spots throughout 76.7-76.8 flt		⌈74.4-74.5⌋ «x-chl»		
76.80 TO 132.90	«WELDED XTAL LITHIC TUFF»	Colour: grey green Grain Size: Strongly welded qtz fsp crystal lithic tuff. Crystals are subrounded. Lithic fragments are generally volcanically derived, with minor argillite and other sedimentary units. Occasional coarse fsp porphyritic fragments with black, weakly magnetic matrix are seen. These are identical to those noted in purple crystal lithic tuff of surface near Ridge zone Welding texture @ 104.9 FLT 111.2-111.5 FLT 114.5 FLT 124.6-125.2 H'thermal Bx -very weak, sericitlly altered 128.7-129.2 FLT 129.5-131.2 Bx -possibly hydrothermal with chl, pyroph stockwork	40	⌈124.6-125.2⌋ «s-ser, m-sil» ⌈129.5-131.2⌋ «m-chl, m-pyroph, w-sil»		
	E.O.H.					

Sample	From (m)	To (m)	Length (m)	ASSAYS Ag ppm	GEOCHEMICAL As ppm	Ba ppm	Cu ppm	Fe %	Pb ppm	Sb ppm	Zn ppm	Au ppb	Hg ppb	S %	Aug/t g/t		COMMENTS
40531	12.20	13.70	1.50	0.1	1	12	4	1.36	13	1	136	12	30	0.11			
40532	35.70	38.10	2.40	0.1	1	10	3	1.41	7	1	128	5	45	0.12			
40533	71.90	73.40	1.50	0.1	16	15	3	1.29	10	1	126	17	35	0.30			
40534	80.70	82.20	1.50	0.1	12	17	3	1.52	14	1	110	13	40	0.26			
40535	124.60	125.20	0.60	0.1	1	8	5	8.65	94	1	78	6	30	0.19			
40536	129.50	132.20	2.70	0.1	1	9	5	1.61	15	1	91	9	35	0.35			

From (m)	To (m)	Length (L)	Sum Of Length S>= 0.00cm	RQD S/LX100	Number Of Fracturs	Fracturs Per Metres	Number Of Veins	Veins Per Metres	Angle	Comments
12.20	13.70	1.50	0.00	0.0	86	57.33	1	0.67	0	
37.50	38.10	0.60	48.00	*****	6	10.00	2	3.33	0	
71.90	73.40	1.50	0.00	0.0	94	62.67	2	1.33	0	
80.70	82.20	1.50	0.00	0.0	41	27.33	0	0.00	0	
124.60	125.20	0.60	0.00	0.0	13	21.67	2	3.33	0	
129.50	132.20	2.70	15.00	555.6	54	20.00	14	5.19	0	

HOLE NUMBER: WF-92-13

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: WOLF92
PROJECT NUMBER: 673
CLAIM NUMBER:
LOCATION: LOOKOUT ZONE

PLOTTING COORDS GRID: I.P. GRID
NORTH: 97300.00N
EAST: 36110.00E
ELEV: 1260.00

ALTERNATE COORDS GRID: I.P. GRID
NORTH: 973+ 0N
EAST: 361+10E
ELEV: 1260.00

COLLAR DIP: -60° 0' 0"
LENGTH OF THE HOLE: 190.50m
START DEPTH: 0.00m
FINAL DEPTH: 190.50m

COLLAR GRID AZIMUTH: 90° 0' 0"

COLLAR ASTRONOMIC AZIMUTH: 90° 0' 0"

DATE STARTED: August 26, 1992
DATE COMPLETED: August 29, 1992
DATE LOGGED: August 31, 1992

COLLAR SURVEY: NO
MULTISHOT SURVEY: NO
RQD LOG: YES

PULSE EM SURVEY: NO
PLUGGED: NO
HOLE SIZE: NQ

CONTRACTOR: ATLAS DRILLING LTD.
CASING: REAMED TO 3.0M
CORE STORAGE: CAMP

PURPOSE:

DIRECTIONAL DATA:

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments	Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
3.66	-	-59° 0'	ACID	OK		-	-	-	-	-	
76.80	-	-60° 0'	ACID	OK		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 3.00	«CASING»					
0.00 TO 93.60						
3.00 TO 80.20	«B PORPHYRY »	Colour: maroon to grey Grain Size: m.gr. and c.gr. As for holes 7,8,9,10 M.gr. to c.gr. euhedral to broken anhedral fsp crystals (50-60%) in maroon to grey, f.gr. groundmass. Quartz crystals are <1 m - 2mm comprising only 3-5%. These are generally anhedral to subhedral, smokey to clear quartz. Although this unit appears intrusive in general (massive, unbedded) a weak orientation of crystals is seen from 10.5-11.9. Xenoliths are present in several places int\ this interval. ╡7.3-7.5╞ «stockwork» 11.9-12.8 m-stockwork -minor banded quartz veinlets ╡13.9-14.1╞ -a coarse grained fsp porphyritic black matrix interval common to this unit. The matrix is weakly magnetic, chloritic, pyritic ╡16.7-17.8╞ «w-m stockwork» -veinlets are weakly banded, lacking complexity ╡20.7-20.9╞ «w-stockwork bx» -brecciated, weakly banded At 33.5 two large fragments of qtz eye rhyolite volcaniclastic ╡34.7-35.1╞ «w-m stockwork»	28	«w-sil, m-lim» Alteration consists of patchy, pervasive and stockwork silicification throughout. Minor green pyrophyllite veinlets along fractures are seen. Limonite staining of fracture surfaces and selvages is common generally with assoicated dendritic manganiferous oxide coatings either pyrolusite or psilomelane ╡7.3-7.5╞ «m-sil» 9.4-9.6 pyrophyllite ╡9.6-10.2╞ «m-lim» «m-chl» «m-sil, s-lim» «m-sil, w-pyroph» ╡21.8-22.2╞ «s-lim» ╡38.2-38.7╞ «w-m sil»	«tr f.gr. py» ╡9.6-10.2╞ «s-pyrol/psilo» «m-Mt, 1% py» «m-pyrol/psilo» «tr pyrol/psilo»	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		╢40.7-41.0╟ «w-h'thermal Bx»		«w-m sil»		
		╢42.8-43.4╟ «w-stockwork»		«m-chl, w-sil»		
		╢43.4-43.7╟ «m-stockwork» -incl 5 cm wide qtz vein with bladed selvages		«m-sil, s-lim»		
		43.7-44.9 w-stockwork 45.3-46.6 w-m stockwork		50.6-53.5 m-lim		
		52.0-53.3 m-s stockwork		- m-s sil, m-lim		
				53.3-55.2 m-chl	- tr-1% py	
		56.3-57.5 m-s stockwork		- m-sil, m-chl		
		65.5-72.0 w-stockwork -bleached core		- w-m sil, m-chl	- tr pyrol/psilo, 1% py - minor py veinlets	
80.20 TO 84.20	«B PORPHYRY »	Colour: green, grey Grain Size: f.gr., m.gr. Less than 1% subhedral qtz grains in v.f.gr. apple green matrix. Green colour is probably due to sericite Bedding @	90	80.2-80.6 -strong sericite		
		╢80.6-81.1╟ s-stockwork -very fine stockwork silicification		«s-sil»	- tr py	
		81.1-82.3 gas phase bx ╢83.5-84.1╟ «F Porphyry Dyke»		83.6-84.2 s-sericite		
84.20 TO 85.10	«B PORPHYRY »					
85.10 TO 86.00	«ANDESITE DYKE»	Colour: Grey Green Grain Size: m.gr. A medium grained andesite dyke. Lower contact is flow banded.				

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
86.00 TO 90.80	«F PORPHYRY DYKE»	Colour: buff/tan Grain Size: m.gr. Medium euhedral to subhedral orthoclase crystals to 5mm and rounded quartz phenocrysts up to 3mm characterize this porphyry. No banding textures. 86.7 -small hydrothermal bx -occasional fsp to several cm ⌈88.1-89.6⌋ -core is strongly bleach Lower contact @	40	«m-s sil»		
90.80 TO 93.60	«B PORPHYRY BRECCIA»	Colour: grey to maroon Grain Size: This interval is well banded with alternating dark magnetic and pink non magnetic phases. Welding is @ Occasional qtz veinlets cut interval. In areas the core has a spotty "leopard skin" type pattern ⌈96.3-96.8⌋ «tuff bx» -angular frags to 2 cm in grey tuffaceous matrix	30	⌈90.8-96.0⌋ «s-i arg», tr ser, s-i lim ⌈97.4-98.1⌋ «m-chl, clay»	- tr py	
93.60 TO 95.60	«F PORPHYRY					
95.60 TO 98.20	«CHILLED MARGIN»	Unusually textured porphyry phase. Unit is well banded, with 1 to 3mm pink and white bands. These look like devitrification textures. Orthoclase phenocrysts up to 5mm in length occur sparsly throughout interval.				
98.20 TO 101.00	«F PORPHYRY »	Colour: grey green Grain Size: c.gr. Strongly flow banded QFP, containing large phenocrysts of zoned plagioclase. Between 99.1 and 99.5m, there is a narrow section of hetero-lithic breccia (HBRX 2). This unit suggests that the intrusive contact is highly irregular. ⌈99.1-99.5⌋ «HBRX 2»		«m-s chl» ⌈99.5-101.0⌋ «w-m sil»	- 3-5% f.gr. py	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		Lower contact @	30			
101.00 TO 102.40	«FLT BX»	Colour; black to buff/tan Grain Size: var. Angular to subrounded silicified fragments in black to buff/tan f.gr. milled matrix {102.1-102.4} «Hbrx 2»		- «m-sil, w-m arg», w-m lim		
102.40 TO 107.80	«FLOW BANDED QP/TUFF BRECCIA»	Colour: pale green Grain Size: var. A highly convoluted interval consisting of flow banded or laminated QP (ash tuff?) and heterolithic breccia. The QP contains angular clasts of chloritized andesite porphyry, possibly derived from the breccia. Clasts are rounded with a maximum diameter of 20cm. The breccia is strongly chloritic with rounded to angular clasts of volcaniclastic sediment (mainly fine sandstones and siltstones) and aphyric rhyolite). {106.6-107.8} «B Porphyry Dyke» The lower halfof the dyke is G porphyry with the typical glomeroporphyritic textures.	30	- «s-chl»	- «tr-1% py»	
107.80 TO 151.40	«HETEROLITHIC BRECCIA 2»	Colour: green. Heterolithic Breccia. Grain Size: var. Subangular to subrounded fragments of various composition from mm scale to tens of centimeters in f.gr. sandy matrix. Fragments of volcanic sandstone, argillite and aphyric rhyolite are present. The rock varies from matrix to clast supported. Clasts are randomly orientated and there is no obvious bedding or grading. 130.0 bedding @ {133.7-134.0} «m-stockwork» -banded qtz veins {141.0-151.2} «w-m stockwork» -stockwork veining increases slightly through this interval 143.3 flt gouge	20	- «w-m chl, tr pyroph» {131.1-151.2} «s-chl» -chlorite alteration increases downhole	- «tr-1% py»	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		145.2-145.4 m-stockwork -banded qtz vein selvages are black, possibly pyritic, vein centres are bleached and overprinted by silica		«w-m sil»	tr py	
		┤147.8-150.1├ banded veins «s stockwork» -black and white banded quartz		«m s sil»		
		148.1-148.5 s-stockwork 149.6-150.1 m-s stockwork and blading	50			
		150.1-150.9 m-stockwork				
		150.9-151.1 bladed vein		- w-m lim, i-sil 151.1-151.4 s-chl		
151.40 TO 160.10	«HYD BX»	Colour: black to white Grain Size var. Brecciated, silica healed. Consists generally of brecciated black silicified fragments cemented by white quartz. Locally fragments are banded black and white silica. Blading textures are seen throughout as are open voids. Black colour of silica may be due to pyrite or other sulphide minerals. Dominant fragments type is argillaceous sediment though some frags of overlying unit are seen		«i-x sil, m-lim»	«tr-1% py»	
		┤151.4-158.6├ «i-x stockwork bx»		«s-i sil»		
		┤158.6-159.8├ «Mass. Bladed Vein» -white, massive silicification, some blading seen overprinted by silica		- x-sil		
		┤159.8-160.1├ «jigsaw bx»		«s sil»		
160.10 TO 162.90	«SED BX» TUFF BX	Colour: green to black Grain Size: f.gr. Interbedded black argillaceous units and green silty to sandy tuffaceous unit. Finer grained argillites have abundance of subrounded to angular fragments of tuffaceous sediments Bedding is generally contorted, convoluted @	40	- «s-chl»		
		┤160.3-160.9├ «flt gouge»				

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		⌈161.1-161.3⌋ «flt gouge» ⌈162.0-162.3⌋ «bladed vein»	 40			
162.90 TO 163.90	«TUFFACEOUS SST»	Colour: green Grain Size: f.gr. Fine grained, granular tuffaceous sandstone or sandy tuff. Weakly brecciated in areas filled by chlorite Bottom contact @	 50	- «s-chl»		
163.90 TO 169.40	«QXAT/FINE QZ SND ST»	Colour: buff, grey, green Grain Size: Convoluted, contorted, welded rhyolite qtz xtal ash tuff. Qtz crystals <1% rounded. Probable rhyolite composition 164.2-164.8 granitic clasts Interbed of granite boulder conglomerate -contact @ ⌈164.8-165.2⌋ «Laminated Ash Tuff» Lower contact @	 40 68	- «w-chl, green ser»		
169.40 TO 183.10	«XVAT»	Colour: green. Crystal Vitric Ash Tuff. Grain Size: f.gr., m.gr. Subrounded lithic frags of varying composition in f.gr. tuffaceous matrix, weakly welded as defined by chloritic fiamme Probably rhyodacitic to dacitic in composition. Cut by minor white qtz veinlets., bladed Local areas are sandy textured 178.7 flt bx Bottom contact @ 183.1m	 26 50 68	- «m-chl, grn ser»	- tr-1% py -v.f.gr. disseminated	
183.10 TO 190.50	«HETEROLITHIC BRECCIA 1»	Colour: green Heterolithic Breccia 1 Grain Size: var. Poorly sorted heterolithic breccia. Clasts vary in size from mm scale to tens of centimeters. They are generally rounded to sub-angular and clast supported. Dominant clasts are granitic intrusive particularly monzonite. Smaller lithic fragments		- «m-chl»	- tr py	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		and crystals in the matrix are derived from disaggregated granitic material. The top third of the interval is poorly bedded and finer grained	40			

Sample	From (m)	To (m)	Length (m)	ASSAYS Ag ppm	GEOCHEMICAL As ppm	Ba ppm	Cu ppm	Fe %	Pb ppm	Sb ppm	Zn ppm	Au ppb	Hg ppb	S %	Aug/t g/t	COMMENTS
40538	6.90	7.10	0.20	0.2	51	41	15	1.39	10	1	73	95	65	0.03		
40539	9.60	10.20	0.60	0.1	22	20	11	1.49	12	1	101	16	45	0.02		
40540	11.90	12.80	0.90	0.1	16	28	13	1.02	10	1	82	50	50	0.03		
40541	13.90	14.10	0.20	0.5	8	33	6	1.67	5	1	413	10	50	0.1		
40542	16.70	17.70	1.00	0.1	42	53	14	1.6	8	1	105	75	45	0.01		
40543	20.70	20.90	0.20	0.3	31	26	14	0.92	7	1	77	35	40	0.02		
40544	21.80	22.20	0.40	0.1	9	40	13	1.32	13	1	108	22	45	0.03		
40545	34.70	35.10	0.40	0.7	61	34	8	0.7	6	1	89	43	40	0.17		
40546	38.20	38.70	0.50	0.1	30	18	6	1.23	6	1	90	16	60	0.02		
40547	40.70	41.00	0.30	0.1	40	64	16	1.77	15	1	112	93	65	0.03		
40548	42.80	43.40	0.60	0.5	43	40	6	1.47	8	1	84	13	45	0.14		
40549	43.40	43.70	0.30	0.1	25	43	7	2.09	10	1	116	24	55	0.13		
40550	43.70	44.90	1.20	0.6	39	26	6	1.29	9	1	89	21	35	0.12		
38801	44.90	45.30	0.40	0.1	39	35	17	1.25	44	1	106	60	55	0.03		
38802	45.30	46.60	1.30	0.2	56	35	9	1.15	15	1	109	31	35	0.07		
38803	52.00	53.30	1.30	0.1	44	39	13	1.13	11	1	127	155	45	0.04		
36601	53.30	56.30	3.00													
38804	56.30	57.50	1.20	1.8	29	16	6	1.14	14	1	83	598	40	0.14	0.66	
36602	57.50	60.00	2.50													
36603	60.00	63.00	3.00													
36604	63.00	65.50	2.50													
38805	65.50	67.00	1.50	0.3	33	20	1	1.36	16	1	97	20	35	0.04		
38806	67.00	68.50	1.50	0.1	20	21	1	1.57	10	1	105	6	35	0.03		
38807	68.50	70.00	1.50	0.2	18	24	1	1.08	10	1	137	5	25	0.05		
38821	80.30	80.60	0.30	1.2	3	10	1	0.46	1	1	105	152	20	0.02		
38808	80.60	81.10	0.50	2.2	12	16	2	0.44	17	1	38	264	30	0.01		
38809	81.10	82.30	1.20	0.1	11	14	1	0.46	11	1	49	47	25	0.01		
38810	86.20	86.70	0.50	0.1	38	112	1	0.93	5	1	108	6	45	0.01		
38811	88.10	89.60	1.50	0.6	27	39	1	0.64	1	1	56	118	35	0.01		
38812	92.10	92.30	0.20	0.5	46	11	1	0.62	7	1	33	15	25	0.01		
38813	92.30	93.80	1.50	0.1	45	42	1	1.2	8	1	92	9	40	0.02		
38814	93.80	95.30	1.50	0.1	28	72	1	0.71	5	1	65	3	35	0.01		
38815	95.30	96.30	1.00	0.1	20	51	1	1.48	10	1	119	9	50	0.03		
38816	96.30	96.80	0.50	0.1	32	36	1	1.53	13	1	87	5	45	0.04		
38817	96.80	97.40	0.60	0.2	136	14	1	1.01	10	1	126	8	35	0.18		
38818	97.40	98.20	0.80	0.1	94	10	1	0.83	9	1	125	7	40	0.27		
38819	98.20	99.10	0.90	0.1	14	22	1	0.78	9	1	72	8	30	0.13		
38822	99.10	99.50	0.40	0.3	1	29	1	1.17	15	1	129	75	25	0.09		

Sample	From (m)	To (m)	Length (m)	Ag ppm	As ppm	Ba ppm	Cu ppm	Fe %	Pb ppm	Sb ppm	Zn ppm	Au ppb	Hg ppb	S %	Aug/t g/t
38820	99.50	101.00	1.50	0.1	26	11	2	0.99	7	1	98	2	25	0.26	
38823	101.00	102.40	1.40	0.1	15	31	2	1.42	15	1	175	5	25	0.08	
38824	102.40	103.90	1.50	0.1	66	15	2	1.03	9	1	73	24	15	0.1	
36605	103.90	107.00	3.10												
36606	107.00	110.00	3.00												
36607	110.00	113.00	3.00												
36608	113.00	116.00	3.00												
36609	116.00	119.00	3.00												
36610	119.00	124.00	5.00												
36611	124.00	129.00	5.00												
36612	129.00	133.70	4.70												
38825	133.70	134.00	0.30	0.1	3	12	62	3.85	1	1	64	69	45	0.33	
36613	134.00	136.00	2.00												
36614	136.00	138.00	2.00												
36615	138.00	140.00	2.00												
36616	140.00	141.20	1.20												
38826	141.00	141.20	0.20	0.1	1	18	77	4.94	1	1	67	357	55	0.29	
38827	141.20	142.70	1.50	0.1	1	9	131	6.28	1	1	86	132	30	0.26	
38828	142.70	144.20	1.50	0.1	1	17	124	6.39	1	1	80	637	30	0.25	0.95
38829	144.20	145.70	1.50	2.8	1	18	118	5.97	1	1	77	657	25	0.22	0.71
38830	145.70	147.20	1.50	0.1	1	24	84	5.72	1	1	81	1604	60	0.17	1.9
38831	147.20	147.80	0.60	0.1	1	19	72	4.92	1	1	71	768	40	0.21	0.75
38832	147.80	148.10	0.30	14.8	1	23	79	3.41	5	1	50	3720	30	0.02	3.56
38833	148.10	148.50	0.40	8.3	1	17	81	4.13	1	1	97	6270	25	0.17	6.51
38834	148.50	149.60	1.10	0.1	1	8	76	4.89	1	1	112	1560	30	0.17	1.66
38835	149.60	150.10	0.50	40.3	1	26	41	3.13	1	1	164	3465	40	0.03	3.46
38836	150.10	150.90	0.80	0.1	1	14	65	4.31	1	1	238	536	20	0.14	0.59
38837	150.90	151.10	0.20	4	1	23	24	2.67	6	1	143	1260	25	0.01	1.36
38838	151.10	151.40	0.30	3.9	1	13	81	3.36	1	1	344	1105	35	0.01	1.29
38839	151.40	152.90	1.50	7.2	1	27	43	1.75	1	1	193	1940	25	0.02	2.12
38840	152.90	154.40	1.50	5	5	32	15	1.02	4	1	103	650	35	0.03	0.67
38841	154.40	155.90	1.50	5.7	10	28	12	0.71	5	1	58	820	30	0.04	0.88
38842	155.90	157.40	1.50	11.7	14	35	12	0.58	7	1	45	1800	30	0.01	1.85
38843	157.40	158.60	1.20	19.9	16	63	16	0.77	6	1	45	2150	35	0.02	2.3
38844	158.60	159.80	1.20	7.6	17	13	5	0.38	6	1	12	715	45	0.01	0.66
38845	159.80	160.10	0.30	9	16	35	14	1.52	14	1	63	358	40	0.01	
38846	160.10	162.00	1.90	0.1	1	29	65	3.25	13	1	372	150	30	0.22	
38847	162.00	162.30	0.30	5.1	11	30	9	2.22	10	1	107	462	15	0.05	0.58

Sample	From (m)	To (m)	Length (m)	Ag ppm	As ppm	Ba ppm	Cu ppm	Fe %	Pb ppm	Sb ppm	Zn ppm	Au ppb	Hg ppb	S %	Aug/t g/t
38848	162.30	162.90	0.60	1.2	26	42	23	1.61	20	1	124	55	35	0.27	
38849	162.90	163.90	1.00	0.1	1	31	205	0.96	17	1	120	83	60	0.15	
38850	171.10	171.60	0.50	0.1	1	15	29	0.91	15	1	99	417	45	0.1	
36617	171.60	175.00	3.40												

From (m)	To (m)	Length (L)	Sum Of Length S>= 0.00cm	RQD S/LX100	Number Of Fracturs	Fracturs Per Metres	Number Of Veins	Veins Per Metres	Angle	Comments
6.90	7.10	0.20	0.00	0.0	7	35.00	10	50.00	0	
9.60	10.20	0.60	0.00	0.0	18	30.00	4	6.67	0	
11.90	12.80	0.90	24.00	*****	11	12.22	31	34.44	0	
13.90	14.10	0.20	0.00	0.0	1	5.00	7	35.00	0	
16.70	17.70	1.00	26.00	*****	11	11.00	29	29.00	0	
20.70	20.90	0.20	0.00	0.0	4	20.00	4	20.00	0	
21.80	22.20	0.40	0.00	0.0	11	27.50	1	2.50	0	
34.70	35.10	0.40	3.00	750.0	12	30.00	0	0.00	0	
38.20	38.70	0.50	54.00	*****	4	8.00	11	22.00	0	
40.70	41.00	0.30	0.00	0.0	6	20.00	6	20.00	0	
42.80	43.40	0.60	47.00	*****	3	5.00	26	43.33	0	
43.40	43.70	0.30	0.00	0.0	2	6.67	8	26.67	0	
43.70	44.90	1.20	18.00	*****	13	10.83	13	10.83	0	
44.90	45.30	0.40	52.00	*****	9	22.50	18	45.00	0	
45.30	46.60	1.30	0.00	0.0	19	14.62	24	18.46	0	
52.00	53.30	1.30	34.00	*****	26	20.00	20	15.38	0	
56.30	57.50	1.20	21.30	*****	14	11.67	13	10.83	0	
65.50	67.00	1.50	16.00	*****	33	22.00	9	6.00	0	
67.00	68.50	1.50	0.00	0.0	16	10.67	4	2.67	0	
68.50	70.00	1.50	15.00	*****	31	20.67	12	8.00	0	
80.30	80.60	0.30	0.00	0.0	7	23.33	3	10.00	0	
80.60	81.10	0.50	46.00	*****	7	14.00	13	26.00	0	
81.10	82.30	1.20	0.00	0.0	28	23.33	18	15.00	0	
86.20	86.70	0.50	0.00	0.0	16	32.00	7	14.00	0	
88.10	89.60	1.50	0.00	0.0	69	46.00	11	7.33	0	
92.10	92.30	0.20	0.00	0.0	7	35.00	4	20.00	0	
92.30	93.80	1.50	0.00	0.0	37	24.67	5	3.33	0	
93.80	95.30	1.50	0.00	0.0	46	30.67	7	4.67	0	
95.30	96.30	1.00	0.00	0.0	36	36.00	6	6.00	0	
96.30	96.80	0.50	0.00	0.0	7	14.00	2	4.00	0	
96.80	97.40	0.60	0.00	0.0	22	36.67	1	1.67	0	
97.40	98.20	0.80	28.00	*****	10	12.50	9	11.25	0	
98.20	99.10	0.90	0.00	0.0	18	20.00	12	13.33	0	
99.10	99.50	0.40	0.00	0.0	11	27.50	2	5.00	0	
99.50	101.00	1.50	0.00	0.0	29	19.33	7	4.67	0	
101.00	102.40	1.40	0.00	0.0	42	30.00	4	2.86	0	
102.40	103.90	1.50	14.00	933.3	30	20.00	7	4.67	0	
133.70	134.00	0.30	0.00	0.0	2	6.67	6	20.00	0	
141.00	141.20	0.20	0.00	0.0	7	35.00	5	25.00	0	
141.20	142.70	1.50	15.00	*****	48	32.00	16	10.67	0	
142.70	144.20	1.50	0.00	0.0	75	50.00	16	10.67	0	
144.20	145.70	1.50	0.00	0.0	69	46.00	19	12.67	0	
145.70	147.20	1.50	13.00	866.7	29	19.33	16	10.67	0	
147.20	147.80	0.60	0.00	0.0	32	53.33	7	11.67	0	

From (m)	To (m)	Length (L)	Sum Of Length S>= 0.00cm	RQD S/LX100	Number Of Fracturs	Fracturs Per Metres	Number Of Veins	Veins Per Metres	Angle	Comments
147.80	148.10	0.30	0.00	0.0	14	46.67	4	13.33	0	
148.10	148.50	0.40	0.00	0.0	12	30.00	10	25.00	0	
148.50	149.60	1.10	0.00	0.0	20	18.18	26	23.64	0	
149.60	150.10	0.50	0.00	0.0	6	12.00	15	30.00	0	
150.10	150.90	0.80	29.00	*****	6	7.50	23	28.75	0	
150.90	151.10	0.20	0.00	0.0	3	15.00	4	20.00	0	
151.10	151.40	0.30	0.00	0.0	100	333.33	5	16.67	0	
151.40	152.90	1.50	15.00	*****	20	13.33	17	11.33	0	
152.90	154.10	1.20	0.00	0.0	61	50.83	28	23.33	0	
154.40	155.90	1.50	0.00	0.0	23	15.33	40	26.67	0	
155.90	157.40	1.50	18.00	*****	16	10.67	17	11.33	0	
157.40	158.60	1.20	0.00	0.0	22	18.33	6	5.00	0	
158.60	159.80	1.20	0.00	0.0	31	25.83	2	1.67	0	
159.80	160.10	0.30	0.00	0.0	4	13.33	5	16.67	0	
160.10	162.00	1.90	15.00	789.5	100	52.63	7	3.68	0	
162.00	162.30	0.30	0.00	0.0	3	10.00	4	13.33	0	
162.30	162.90	0.60	0.00	0.0	18	30.00	1	1.67	0	
162.90	163.90	1.00	0.00	0.0	28	28.00	3	3.00	0	
171.10	171.60	0.50	0.00	0.0	12	24.00	3	6.00	0	

HOLE NUMBER: WF-92-14

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: WOLF92
PROJECT NUMBER: 673
CLAIM NUMBER:
LOCATION: CHOPPER PAD ZONE

PLOTTING COORDS GRID: I.P. GRID
NORTH: 98200.00N
EAST: 35250.00E
ELEV: 1159.00

ALTERNATE COORDS GRID: I.P. GRID
NORTH: 982+ 0N
EAST: 352+50E
ELEV: 1159.00

COLLAR DIP: -45° 0' 0"
LENGTH OF THE HOLE: 139.00m
START DEPTH: 0.00m
FINAL DEPTH: 139.00m

COLLAR GRID AZIMUTH: 90° 0' 0"

COLLAR ASTRONOMIC AZIMUTH: 90° 0' 0"

DATE STARTED: August 29, 1992
DATE COMPLETED: August 31, 1992
DATE LOGGED: September 1, 1992

COLLAR SURVEY: NO
MULTISHOT SURVEY: NO
RQD LOG: YES

PULSE EM SURVEY: NO
PLUGGED: NO
HOLE SIZE: NQ

CONTRACTOR: ATLAS DRILLING LTD.
CASING: REAMED TO 6.1M
CORE STORAGE: CAMP

PURPOSE: To test a coincident IP and high resistivity anomaly along the east margin of the Chopper Pad

DIRECTIONAL DATA: Zone.

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
6.10	-	-43° 0'	ACID	OK	
93.90	-	-43° 0'	ACID	OK	
139.00	-	-42° 0'	ACID	OK	

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
-	-	-	-	-	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 6.10	«CASING»					
6.10 TO 8.30	«BASALT DYKE»	Colour: black Grain Size: v.f.gr. Massive interbedded v.f.gr. argillite. Bottom contact is faulted				
8.30 TO 25.00	«RHYOLITE»	Colour: grey green Grain Size: f.gr. Consists of f.gr., flow banded feldspar phyric rhyolite. Interval is strongly jigsaw brecciated and hydrofractured. Silica healed		Argillic alteration of fsp to clays is dominant and strong throughout. Silification is prominent through brecciated area. Fe oxidation of pyrite is common	Probable high py content but mostly oxidized. Within areas of silicification pyrolusite and/or psilomelane is common as veins. In areas these black bands appear metallic and may be v.f.gr. pyrite forming along wall rock associated with silicific'n	
		⟦8.3-21.5⟧ «s-jigsaw breccia»		«m-s sil, s-arg, m-lim»	«tr-3% py, pyrol/psilo»	
		16.5 bedding @	22			
		16.8-21.5 «s-jigsaw bx»		«w-s sil, s-arg»	«tr-3% py, pyrol/psilo»	
		21.5-21.7 -qtz vein		-20% hem -occurs after py as spotted texture through matrix		
				⟦21.7-25.0⟧ «20% hem, m-arg» after py		
		25.0 lower contact @	22			
25.00 TO 27.60	«BASALT DYKE»	Colour: black Grain Size: v.f.gr. Massive, black, v.f.gr. basalt			«3-5% v.f.gr. py»	
		Lower contact @	46			

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
27.60 TO 30.90	«RHYOLITE»	Colour: grey green Grain Size: f.gr. As for interval 8.3-25.0. Flow banding minor lithics ╟29.7-30.4╢ «s-jigsaw bx»	18	«s-i arg» «s-arg, m-sil»	 «tr py, pyrol/psilo» -black mineral occuring as breccia infillings	
30.90 TO 31.70	«BASALT DYKE»	Colour: grey, black Grain Size: f.gr. Interbeded black argillaceous sediments and f.gr. grey siltstones	70			
31.70 TO 45.80	«SPERULITIC RHYOLITE»	Colour: cream maroon Grain Size: f.gr. m.gr. Strongly banded and welded spherulitic rhyl or vitric tuff. Contains <1% qtz and fsp crystals. Rare lithic fragments are observed @ 38.0 banding/welding up to 50% spherulites 41.7 banding@ ╟43.3-43.9╢ «-stockwork pyrophyllite» soft cream coloured mineral forming veins	 44 62	 ╟31.7-39.0╢ «s-i arg, w-lim» -strong alteration of fsp to clays; pyrophyllite veinlets		
45.80 TO 139.00	«FLOW BANDED RHYL»	Colour: pale grey green to light maroon Grain Size: f.gr. Similar compositionally to interval 8.3-25.0 but finer grained. Consists of alternating pale grey and pale green bands of ashy material with minor to 10% qtz and fsp crystals and occasional accidental fragments ╟47.0-47.2╢ «flt gouge» ╟49.7-50.0╢ «flt gouge» 50.8 bedding @ 54.5 bedding @ ╟56.6-56.9╢ «vuggy qtz vein» from 63.4-64.7 matrix is glassy, chloritic faimme present 69.8-73.3	 48 40 48	«w-hem, lim, w-arg, w-pyroph stwrk»	«tr py»	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		-possible interbed of flowbanded rhyolite	10			
		72.0-72.2 -weak stockwork, black sil		- w-sil		
		⟦72.7-73.3⟧ «m-s stockwork» -stockwork sil and pyrophyllite vein				
		90.7-84.3 -may be interbedded of maroon grey flow banded rhyolite. Continuous convoluted contorted banding and higher proportion of euhedral fsp suggest this. However glassy shards broken crystals and occasional accidentals suggest this may still be a strongly banded tuff. -Bedding @	18			
		⟦84.3-93.9⟧ a cream coloured ashy interval		«m-arg»		
		93.9 -onward the unit is weakly banded or welded again to spherulitic locally. Minor qtz and pyrophyllite stockwork cut the interval	60	⟦102.4-104.9⟧ «w-m stockwork, sil, pyroph»		
		106.7 -banding @	38			
		⟦117.4-118.9⟧ «w-py, sil stockwork» ⟦123.3-124.6⟧ «fault zone» ⟦124.6-130.1⟧ «lapilli tuff» ⟦130.1-139.0⟧ «welded tuff & agglomerate»		«i-arg» «i-arg» «w-arg»	«tr-1% py»	
	E.O.H.					

Sample	From (m)	To (m)	Length (m)	ASSAYS Ag ppm	GEOCHEMICAL As ppm	Ba ppm	Cu ppm	Fe %	Pb ppm	Sb ppm	Zn ppm	Au ppb	Hg ppb	S %	Aug/t g/t		COMMENTS
38851	8.30	9.80	1.50	0.1	13	8	7	0.61	15	1	90	12	30	0.04			
38852	9.80	11.50	1.70	0.1	15	6	5	0.57	18	1	136	10	30	0.08			
38853	11.50	12.40	0.90	0.1	19	4	8	0.77	18	1	120	15	35	0.09			
38854	12.40	13.90	1.50	0.1	7	5	4	0.59	20	1	107	11	35	0.06			
38855	13.90	15.40	1.50	0.1	7	4	5	0.48	17	1	111	7	20	0.03			
38856	15.40	16.80	1.40	0.1	9	5	6	0.68	15	1	142	10	35	0.08			
38857	16.80	17.00	0.20	0.1	1	5	3	0.74	21	1	193	6	30	0.05			
38858	17.00	17.90	0.90	0.1	1	5	4	0.59	19	1	146	4	20	0.03			
38859	17.90	18.50	0.60	0.5	10	4	4	0.69	19	1	119	7	25	0.09			
38860	18.50	18.90	0.40	1	9	3	3	0.59	18	1	109	6	30	0.08			
38861	18.90	20.40	1.50	0.1	13	6	2	0.77	17	1	115	14	35	0.11			
38862	20.40	21.50	1.10	0.1	18	5	3	0.71	14	1	120	15	20	0.18			
38863	21.50	21.70	0.20	0.1	17	8	3	0.47	4	1	33	40	15	0.05			
38864	29.70	30.40	0.70	0.1	1	7	5	0.95	22	1	203	5	40	0.06			
38865	31.70	33.30	1.60	0.1	15	9	4	0.48	19	1	134	21	35	0.23			
38866	33.30	34.20	0.90	0.1	29	4	3	0.5	20	1	142	17	35	0.16			
38867	34.20	34.70	0.50	0.1	28	4	4	0.62	19	1	112	31	25	0.15			
38868	43.50	43.90	0.40	0.1	65	5	3	0.65	9	1	83	60	30	0.22			
38869	56.60	56.90	0.30	0.1	39	4	3	0.73	21	1	111	19	35	0.31			
38870	72.00	72.20	0.20	0.1	26	6	4	0.62	13	1	93	31	25	0.17			
38871	72.70	73.30	0.60	1.1	37	4	3	0.58	47	1	111	570	20	0.18			
38872	102.40	103.60	1.20	0.1	26	5	6	0.6	15	1	115	50	20	0.25			
38873	103.60	104.90	1.30	0.1	34	5	2	0.58	15	1	116	42	20	0.24			
38875	104.90	106.20	1.30	0.1	30	6	2	0.51	20	1	96	66	25	0.21			
38874	111.90	112.90	1.00	0.1	35	5	3	0.55	14	1	83	75	20	0.22			
38875	117.40	118.90	1.50	0.1	30	6	2	0.51	20	1	96	66	25	0.21			
38876	132.30	133.80	1.50	0.1	73	7	3	0.64	14	1	61	37	35	0.32			

From (m)	To (m)	Length (L)	Sum Of Length S>= 0.00cm	RQD S/LX100	Number Of Fracturs	Fracturs Per Metres	Number Of Veins	Veins Per Metres	Angle	Comments
8.30	9.80	1.50	13.00	866.7	31	20.67	4	2.67	0	
9.80	11.50	1.70	69.00	*****	15	8.82	3	1.76	0	
11.50	12.40	0.90	55.00	*****	4	4.44	2	2.22	0	
12.40	13.90	1.50	48.00	*****	11	7.33	1	0.67	0	
13.90	15.40	1.50	53.00	*****	12	8.00	6	4.00	0	
15.40	16.80	1.40	61.00	*****	26	18.57	11	7.86	0	
16.80	17.00	0.20	0.00	0.0	2	10.00	1	5.00	0	
17.00	17.90	0.90	32.00	*****	9	10.00	6	6.67	0	
17.90	18.50	0.60	70.00	*****	11	18.33	1	1.67	0	
18.50	18.90	0.40	0.00	0.0	4	10.00	5	12.50	0	
18.90	20.40	1.50	41.00	*****	23	15.33	22	14.67	0	
20.40	21.50	1.10	24.00	*****	14	12.73	5	4.55	0	
21.50	21.70	0.20	0.00	0.0	4	20.00	2	10.00	0	
29.70	30.40	0.70	0.00	0.0	6	8.57	1	1.43	0	
31.70	33.30	1.60	0.00	0.0	34	21.25	2	1.25	0	
33.30	34.20	0.90	0.00	0.0	29	32.22	1	1.11	0	
34.20	34.70	0.50	0.00	0.0	9	18.00	1	2.00	0	
43.50	43.90	0.40	0.00	0.0	12	30.00	15	37.50	0	
56.60	56.90	0.30	0.00	0.0	8	26.67	0	0.00	0	
72.00	72.20	0.20	0.00	0.0	5	25.00	1	5.00	0	
72.70	73.30	0.60	0.00	0.0	17	28.33	12	20.00	0	
102.40	103.60	1.20	0.00	0.0	30	25.00	11	9.17	0	
103.60	104.90	1.30	0.00	0.0	53	40.77	12	9.23	0	
111.90	112.90	1.00	0.00	0.0	19	19.00	17	17.00	0	
117.40	118.90	1.50	0.00	0.0	23	15.33	12	8.00	0	
132.30	133.80	1.50	17.00	*****	52	34.67	3	2.00	0	

HOLE NUMBER: WF-92-15

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: WOLF92
PROJECT NUMBER: 673
CLAIM NUMBER:
LOCATION: CHOPPER PAD ZONE

PLOTTING COORDS GRID: I.P. GRID
NORTH: 97900.00N
EAST: 35200.00E
ELEV: 1181.00

ALTERNATE COORDS GRID: I.P.GRID
NORTH: 979+ 0N
EAST: 352+ 0E
ELEV: 1181.00

COLLAR DIP: -60° 0' 0"
LENGTH OF THE HOLE: 124.40m
START DEPTH: 0.00m
FINAL DEPTH: 124.40m

COLLAR GRID AZIMUTH: 90° 0' 0"

COLLAR ASTRONOMIC AZIMUTH: 90° 0' 0"

DATE STARTED: August 31, 1992
DATE COMPLETED: September 1, 1992
DATE LOGGED: September 1, 1992

COLLAR SURVEY: NO
MULTISHOT SURVEY: NO
RQD LOG: YES

PULSE EM SURVEY: NO
PLUGGED: NO
HOLE SIZE: NQ

CONTRACTOR: ATLAS DRILLING LTD
CASING: REAMED TO 1.5m
CORE STORAGE: CAMP

PURPOSE: Test coincident Ip and resistivity anomaly.

DIRECTIONAL DATA:

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
3.10	-	-60° 0'	ACID	OK	
75.00	-	-58° 0'	ACID	OK	
122.50	-	-60° 0'	ACID	OK	

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
-	-	-	-	-	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 1.50	«CASING»					
1.50 TO 13.90	«LAPILLI TUFF»	Colour: grey green Grain Size: var. Strongly altered comprised of abundant variable size rounded to subrounded rhyolite lapillis. These appear to be primarily qtz-eye rhyolite intrusion and spherulitic tuffaceous lapilli. Common brecciated veins are seen with vuggy ?? quartz ?? cavities. Much of the interstitial material in these breccia is black silica the colour being imparted by the presence of v.f.gr. pyrite. Some selvages on thse black veins are visibly coarse pyritic.		The interval is strongly to intensely silicified throughout as pervasive and ash stockwork silicification and veins Small intervals of limonitic alter'n are seen throughout.	Pyritic occurs as v.f.gr. within areas of stockwork silicification and veining	Possible spherulitic tuff - spherules to several cm
		Weak banding @	58			
		«s-stockwork, vn bx»		«m-i sil, local lim»	«tr-3% py»	
		1.5-2.4 - s-stockwork	60	- s-i sil	- 2% v.f.gr. py	
				2.4-3.1 - w-m sil, s-lim		
		3.1-5.9 - occasional black silica veinlets cut interval		- m-sil	- tr py	
		5.9-7.1 - jigsaw brecciated black silica veinlets, minor open cavities		- s-sil, s-lim	- 2-3% v.f.gr. py	
				7.1-7.8 - m-s sil, w-chl	- tr py	
		7.8-9.9 - s-stockwork, black and white silicification banded locally		- s-i sil	- tr-1% v.f.gr. py with stockwork veinlets as selvages	
		9.9-10.0 - vn bx -brecciated fragments in weak bladed silica veins	42	- x-sil		
		10.0-13.0 - s-stockwork - occasional cm scale veins, weakly bladed		-s-i sil, w-chl	- 2-3% v.f.gr. py	
				13.0-13.9		

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		Bottom contact		- s-lim, m-sil		
13.90 TO 16.00	«RY TUFF BX »	Colour: grey to black Grain Size: var. Variably sized angular to subrounded fragments of tuffaceous material in a black, f.gr. pyritic matrix. Poorly sorted		«m-sil»	«2-3% v.f.gr. py»	
16.00 TO 27.40	«SPHERULITIC RHYOLITE»	Colour: grey green Grain Size: var. As for interval 1.5-13.9 Fragments of variable size in grey green tuffaceous matrix. Spherules up to 1-2 cm showing good radiative textures Small interbeds of tuff breccia and crystal tuff, locally banded		ǂ16.0-21.4ǂ «w-s sil»	ǂ16.0-21.4ǂ «tr-3% py»	
				16.0-17.3 -w-sil, m-chl		
		17.3-18.1 -tuff bx		-m-s sil	-1-2% v.f.gr. py	
		ǂ18.1-19.2ǂ «m-stockwork»		«m-sil»	«tr-1% py»	
				19.2-19.9 s-arg 19.9-20.6 s-sil 20.6-21.4 m-s sil	-2-3% py	
		21.4-23.4 xtal tuff 23.4-24.0 tuff bx				
		ǂ24.5-25.2ǂ «m-stockwork»		«m-s sil»	«2-3% v.f.gr. py»	
				ǂ25.2-26.6ǂ «m-sil» ǂ26.6-27.4ǂ «m-arg»		
		Bottom Contact	60			
27.40 TO 39.10	«SPHER RHYL »	Colour: green Grain Size: f.gr. 1-2% subhedral to rounded qtz crystals (<2 mm) in wispy, weakly banded chloritized groundmass. Could possibly be rhyodacite flow however some lapilli are noted locally				

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		Minor black pyritic veinlets				
		⌈34.1-35.1⌋ «w-stockwork»				
		36.2-36.8 Bx		- s-lim, s-sil	- 2-3% py	
		36.9-37.3 -flt gouge				
		37.3-37.6 -black matrix bx			- 3-5% py	
				⌈37.6-38.8⌋ «m-sil»	«tr-1% py»	
39.10 TO 52.60	«RHYOLITE BRECCIA»	Colour: green to black Grain Size: var. Fragments of grey green tuff in f.gr. black silicified matrix. Core is cut in areas by white and black silica veining. Silicification increases down hole		- s-sil	- «2-3% v.f.gr. py»	
				⌈39.1-42.1⌋ «m-s sil, w-chl» ⌈42.1-52.6⌋ «i-sil»		
		45.9-46.0 - hydrothermal bx vein @	74			
		48.5 - bedding @	12			
		50.8-51.0 - banded qtz @ - alternating brown black and white v.f.gr. bands several hundred bands	40			
52.60 TO 59.20	«FB RHYOLITE»	Colour: grey green Grain Size: f.gr. Flow banded rhyolite. Very glassy groundmass with cream coloured and green bands. Some flattened pumice fragments seen. Less than 5% qtz crystals. Occasional accidental fragments.		«s-chl, w-ser»		
59.20 TO 81.90	«VITROPHYRIC RHYOLITE»	Colour: grey green Grain Size: v.f.gr. 1-2% rounded 2 mm qtz crystals, 2-3% rounded lithic fragments in f.gr. fsp rich vitric ground mass. No bedding observed - massive unit.		«s-chl, m-sil»		

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		Narrow zones of qtz stockworking. From 65.0 onward matrix is tuffaceous with weak welding textures @ 68.1-68.2 -black banded silicification and white breccia vein 72.7-73.2 - w-stockwork, some black banded vein, minor bladed veins ╢73.2-74.6╟ «tuff bx» - black matrix, minor banded veins ╢74.6-75.8╟ «stkwrk sil pyroph»	40 44	72.4-72.7 - x-lim - s-arg, pyroph?, greenish soft waxy mineral «w-m sil» «perv. pyroph»	«1-2% py»	From 75.8 onward the unit becomes sandier and small interbeds of sandy silty argillaceous material become more frequent
81.90 TO 109.00	«LAPILLI TU FF»	Colour: black to grey Grain Size: var. Overlying unit grades into this one. This is a conglomerate unit, poorly sorted consisting of subrounded to subangular assorted fragments in a black, f. to v.f.gr. matrix. The unit is matrix supported though the degreee of support varies widely throughout. Occasional small clast supported interval are noted. Fragments range from welded tuffs to black bedded argillite to rhyolite and rhyodacitic fragments. Some fragments are completely clay altered. Others are chloritically altered and others are silicified. Weakly defined bedding @ At around 102 m granitic clasts identical to those seen in basal conglomerate units in other holes are seen. Stockwork fracturing and silicification and breccia veining occur throughout varying in intensity from weak to intense. Some banded silicification is seen. Stockwork pysophyllite veins are seen as well	26			

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		‡82.7-97.8‡ «w-x stockwork» 82.7-84.2 w-stockwork 87.2 w-stockwork 88.7 bladed, white sil veinlets		«w-x sil» - w-m sil, pyroph - m-sil	«up to 2% v.f.gr. py»	
		88.7-90.4 s-stockwork -lower contact @	60	- m-s sil		
		90.4-91.1 -clast supported conglomerate, s-i stockwork		- s-i sil	- 2% v.f.gr. py	
		91.1-91.5 w-stockwork - lower contact @	64			
		91.5-91.8 - clast supported, s-i stockwork		- s-i sil	- 2% v.f.gr. py	
		91.8-92.1 - i-x stockwork		- i-x sil	- 2-55 v.f.gr. py	
		92.1-93.6 - m-s stockwork		- m-s sil		
		93.6-94.9 - w-stockwork				
		94.9-95.3 - s-stockwork bx				
		95.3-97.8 - w-stockwork				
		After 97.8 stockworking drops off dramatically to virtually now. This is accompanied by a change in matrix material from v.f.gr. silty matrix to f.gr. sandy matrix.				
		Bottom contact unclear if stratigraphic or fault				
109.00 TO 124.40	«FLOW BANDED SPHER RHYL»	Colour: grey Grain Size; f.gr. Well defined bedding by microspherulitic textures. Less than 1% rounded 1 mm qtz crystals in f.gr. matrix. Occasinal black matrix tuff breccia are seen.		«m-lim, s-arg, poss. rhrodocrosite» -soft pink clay mineral	«tr py» -occurs as very f.gr. black veinlets	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		109.0-109.5 -bedding @	18	- s-lim		
		110.0-110.3 -tuff bx				
	E.O.H.					

Sample	From (m)	To (m)	Length (m)	ASSAYS Ag ppm	GEOCHEMICAL As ppm	Ba ppm	Cu ppm	Fe %	Pb ppm	Sb ppm	Zn ppm	Au ppb	Hg ppb	S %	Aug/t g/t		COMMENTS
38877	1.60	2.20	0.60	2.1	152	23	41	0.92	17	1	29	40	70	0.1			
38878	2.20	2.40	0.20	8.2	113	18	30	0.71	27	3	54	117	60	0.32			
38879	2.40	3.10	0.70	1.6	39	12	12	0.81	14	1	34	31	35	0.03			
38880	3.10	4.70	1.60	1.3	33	10	6	0.6	25	1	40	90	40	0.15			
38881	4.70	5.90	1.20	1	29	6	5	0.6	36	1	90	42	45	0.16			
38882	5.90	7.10	1.20	1.3	52	13	6	0.93	22	1	53	125	40	0.1			
38883	7.10	7.80	0.70	1.5	51	7	6	0.69	29	1	61	73	40	0.4			
38884	7.80	9.00	1.20	1.5	50	10	6	0.78	23	1	77	74	45	0.5			
38885	9.00	9.40	0.40	1.1	43	9	6	0.69	20	1	95	48	65	0.33			
38886	9.40	10.00	0.60	9.8	51	6	6	0.65	25	2	82	392	50	0.52			
38887	10.00	10.70	0.70	7.2	83	11	6	0.95	31	1	89	156	50	0.67			
38888	10.70	11.60	0.90	3.4	45	6	5	0.55	48	3	152	125	45	0.21			
38889	11.60	12.40	0.80	4.2	56	7	5	0.62	36	3	83	54	55	0.34			
38890	12.40	13.00	0.60	2.6	55	13	8	0.74	19	2	61	46	35	0.29			
38891	13.00	13.90	0.90	1.1	20	17	4	1.09	17	1	71	158	35	0.04			
38892	13.90	14.90	1.00	2.7	32	9	5	0.48	37	1	77	95	60	0.34			
38893	14.90	16.00	1.10	9.7	70	19	5	0.82	31	2	67	80	55	0.35			
38894	16.00	17.30	1.30	1.3	24	6	5	0.43	24	1	105	165	40	0.17			
38895	17.30	18.10	0.80	5.2	42	32	6	2.83	67	1	100	991	70	0.11	0.87		
38896	18.10	19.20	1.10	1.6	22	7	6	0.53	40	1	94	97	50	0.09			
38897	19.20	19.90	0.70	1.1	22	11	4	0.66	19	1	111	369	65	0.01			
38898	19.90	20.60	0.70	1.9	48	22	9	0.71	45	2	96	92	55	0.15			
38899	20.60	21.40	0.80	1.1	26	8	9	0.59	25	1	60	109	45	0.07			
38900	21.40	22.40	1.00	1.2	16	6	6	0.45	31	1	125	108	35	0.16			
38901	22.40	23.40	1.00	0.4	25	11	5	0.58	24	1	100	142	55	0.25			
38902	23.40	24.90	1.50	1	28	6	6	0.54	25	1	100	114	60	0.19			
38903	24.90	25.20	0.30	3.9	40	7	6	0.45	85	5	94	404	30	0.2			
38904	25.20	26.60	1.40	1.7	34	8	6	0.45	69	2	135	230	50	0.16			
38905	26.60	27.40	0.80	0.6	29	8	4	0.55	27	1	96	66	40	0.29			
38906	27.40	28.90	1.50	0.5	56	8	4	0.75	17	1	83	60	60	0.31			
38907	34.10	35.10	1.00	0.4	18	4	4	0.53	18	1	116	41	55	0.08			
38908	36.20	36.90	0.70	0.7	19	5	4	0.56	13	1	53	14	55	0.01			
38909	36.90	37.30	0.40	2.4	299	56	33	14.27	29	1	633	430	210	0.01			
38910	37.30	37.60	0.30	0.6	19	4	5	0.44	33	1	83	14	50	0.06			
38911	37.60	39.10	1.50	0.6	27	5	5	0.72	23	1	132	25	40	0.14			
38912	39.10	40.60	1.50	0.7	22	5	4	0.94	16	1	115	27	40	0.07			
38913	40.60	42.10	1.50	1.2	28	4	4	0.69	20	1	103	35	45	0.07			
38914	42.10	43.60	1.50	1.2	37	4	4	0.71	24	1	129	40	30	0.21			

Sample	From (m)	To (m)	Length (m)	Ag ppm	As ppm	Ba ppm	Cu ppm	Fe %	Pb ppm	Sb ppm	Zn ppm	Au ppb	Hg ppb	S %	Aug/t g/t
38915	43.60	45.10	1.50	2.1	36	4	5	0.74	22	1	134	33	35	0.18	
38916	45.10	45.90	0.80	3.6	26	5	6	0.62	25	2	97	42	40	0.16	
38917	45.90	46.00	0.10	11.4	31	5	7	0.62	20	3	69	22	60	0.4	
38918	46.00	47.50	1.50	7.9	37	13	7	0.87	17	4	74	44	45	0.32	
38919	47.50	49.00	1.50	3.1	29	9	5	0.57	21	1	95	38	35	0.18	
38920	49.00	50.50	1.50	1.2	35	11	6	0.74	19	1	65	55	40	0.17	
38921	50.50	50.80	0.30	0.3	19	14	4	1.07	6	1	32	16	30	0.01	
38922	50.80	51.00	0.20	4.8	30	23	10	1.64	11	1	47	21	20	0.13	
38923	51.00	52.60	1.60	2.1	29	4	6	0.59	17	1	106	18	40	0.11	
38924	63.20	64.20	1.00	1.1	43	8	4	0.43	21	1	98	75	45	0.19	
38925	68.10	68.30	0.20	0.7	38	9	6	0.68	19	1	110	178	35	0.19	
38926	72.40	72.70	0.30	4.5	11	8	6	7.46	11	1	186	207	10	0.09	
38927	72.70	73.20	0.50	9.9	72	7	6	0.67	28	1	116	719	55	0.29	0.7
38928	73.20	74.60	1.40	4.9	38	8	5	0.4	36	1	104	109	35	0.16	
38929	74.60	75.80	1.20	2.5	43	6	4	0.42	19	1	125	239	40	0.21	
38930	75.80	77.00	1.20	1.2	40	5	4	0.38	19	1	126	380	50	0.18	
38931	82.70	84.20	1.50	5	20	14	10	0.76	22	1	150	12	55	0.07	
38932	87.20	88.70	1.50	0.8	5	14	15	1.14	27	1	171	14	85	0.04	
38933	88.70	89.70	1.00	0.3	1	17	13	1.12	27	1	178	9	65	0.02	
38934	89.70	90.40	0.70	0.7	12	12	9	0.55	18	1	119	17	60	0.05	
38935	90.40	91.10	0.70	1.5	25	11	8	0.39	12	1	111	34	35	0.09	
38936	91.10	91.50	0.40	3.2	27	19	12	0.45	28	1	147	45	25	0.22	
38937	91.50	91.80	0.30	3.6	27	9	11	0.37	26	1	91	49	55	0.21	
38938	91.80	92.10	0.30	2.5	36	9	8	0.39	15	1	80	50	25	0.16	
38939	92.10	93.60	1.50	3.2	39	18	9	1.06	17	1	110	52	45	0.17	
38940	93.60	94.90	1.30	1.1	5	17	12	1.01	25	1	156	20	50	0.08	
38941	94.90	95.30	0.40	1.7	23	13	26	0.98	21	1	147	55	30	0.13	
38942	95.30	96.80	1.50	1.3	14	13	10	0.84	21	1	148	59	45	0.07	
38943	96.80	97.80	1.00	0.8	17	13	8	0.83	19	1	136	53	35	0.08	
38944	97.80	99.30	1.50	0.2	1	13	13	1	22	1	169	61	25	0.06	
38945	109.00	109.50	0.50	4.9	38	13	8	2.04	7	1	52	17	45	0.03	
38946	109.50	110.30	0.80	5.4	37	8	7	1.7	14	1	57	18	40	0.15	
38947	110.30	111.70	1.40	8.3	44	11	6	1.09	17	1	34	24	70	0.03	
38948	111.70	111.90	0.20	22.6	61	8	63	0.82	20	1	20	39	40	0.43	
38949	122.90	124.40	1.50	0.8	14	8	6	0.26	9	1	18	4	60	0.01	

From (m)	To (m)	Length (L)	Sum Of Length S>= 0.00cm	RQD S/LX100	Number Of Fracturs	Fracturs Per Metres	Number Of Veins	Veins Per Metres	Angle	Comments
1.60	2.20	0.60	0.00	0.0	17	28.33	4	6.67	0	
2.20	2.40	0.20	20.00	*****	32	160.00	30	150.00	0	
2.40	3.10	0.70	52.00	*****	11	15.71	33	47.14	0	
3.10	4.70	1.60	76.00	*****	17	10.63	47	29.38	0	
4.70	5.90	1.20	77.00	*****	18	15.00	62	51.67	0	
5.90	7.10	1.20	74.00	*****	10	8.33	44	36.67	0	
7.10	7.80	0.70	70.00	*****	5	7.14	29	41.43	0	
7.80	9.00	1.20	120.00	*****	7	5.83	28	23.33	0	
9.00	9.40	0.40	24.00	*****	3	7.50	12	30.00	0	
9.40	10.00	0.60	44.00	*****	4	6.67	32	53.33	0	
10.00	10.70	0.70	70.00	*****	3	4.29	18	25.71	0	
10.70	11.60	0.90	80.00	*****	4	4.44	27	30.00	0	
11.60	12.40	0.80	70.00	*****	4	5.00	13	16.25	0	
12.40	13.00	0.60	50.00	*****	3	5.00	25	41.67	0	
13.00	13.90	0.90	65.00	*****	6	6.67	23	25.56	0	
13.90	14.90	1.00	94.00	*****	9	9.00	62	62.00	0	
14.90	16.00	1.10	79.00	*****	10	9.09	17	15.45	0	
16.00	17.30	1.30	113.00	*****	9	6.92	12	9.23	0	
17.30	18.10	0.80	48.00	*****	10	12.50	8	10.00	0	
18.10	19.20	1.10	96.00	*****	5	4.55	23	20.91	0	
19.20	19.90	0.70	23.00	*****	10	14.29	45	64.29	0	
19.90	20.60	0.70	0.00	0.0	17	24.29	28	40.00	0	
20.60	21.40	0.80	0.00	0.0	15	18.75	29	36.25	0	
21.40	22.40	1.00	23.00	*****	12	12.00	17	17.00	0	
22.40	23.40	1.00	80.00	*****	11	11.00	11	11.00	0	
23.40	24.90	1.50	89.00	*****	12	8.00	38	25.33	0	
24.90	25.20	0.30	25.00	*****	7	23.33	27	90.00	0	
25.20	26.60	1.40	81.00	*****	19	13.57	32	22.86	0	
26.60	27.40	0.80	57.00	*****	5	6.25	12	15.00	0	
27.40	28.90	1.50	124.00	*****	11	7.33	31	20.67	0	
34.10	35.10	1.00	63.00	*****	9	9.00	8	8.00	0	
36.20	36.90	0.70	46.00	*****	5	7.14	9	12.86	0	
37.30	37.60	0.30	30.00	*****	2	6.67	22	73.33	0	
37.60	39.10	1.50	127.00	*****	15	10.00	42	28.00	0	
39.10	40.60	1.50	102.00	*****	17	11.33	12	8.00	0	
40.60	42.10	1.50	139.00	*****	18	12.00	24	16.00	0	
42.10	43.60	1.50	114.00	*****	14	9.33	23	15.33	0	
43.60	45.10	1.50	128.00	*****	10	6.67	21	14.00	0	
45.10	45.90	0.80	53.00	*****	15	18.75	8	10.00	0	
45.90	46.00	0.10	10.00	*****	0	0.00	2	20.00	0	
46.00	47.50	1.50	35.00	*****	22	14.67	11	7.33	0	
47.50	49.00	1.50	100.00	*****	18	12.00	8	5.33	0	
49.00	50.50	1.50	52.00	*****	16	10.67	17	11.33	0	
50.50	50.80	0.30	13.00	*****	3	10.00	1	3.33	0	

From (m)	To (m)	Length (L)	Sum Of Length S>= 0.00cm	RQD S/LX100	Number Of Fracturs	Fracturs Per Metres	Number Of Veins	Veins Per Metres	Angle	Comments
50.80	51.00	0.20	0.00	0.0	3	15.00	2	10.00	0	
51.00	52.60	1.60	115.00	*****	9	5.63	20	12.50	0	
63.20	64.20	1.00	64.00	*****	14	14.00	11	11.00	0	
68.10	68.30	0.20	0.00	0.0	2	10.00	2	10.00	0	
72.40	72.70	0.30	0.00	0.0	3	10.00	0	0.00	0	
72.70	73.20	0.50	50.00	*****	3	6.00	11	22.00	0	
73.20	74.60	1.40	129.00	*****	10	7.14	8	5.71	0	
74.60	75.80	1.20	88.00	*****	7	5.83	24	20.00	0	
75.80	77.00	1.20	84.00	*****	9	7.50	43	35.83	0	
82.70	84.20	1.50	109.00	*****	14	9.33	37	24.67	0	
87.20	88.70	1.50	131.00	*****	9	6.00	22	14.67	0	
88.70	89.70	1.00	79.00	*****	13	13.00	15	15.00	0	
89.70	90.40	0.70	34.00	*****	5	7.14	22	31.43	0	
90.40	91.10	0.70	45.00	*****	3	4.29	2	2.86	0	
91.10	91.50	0.40	40.00	*****	1	2.50	13	32.50	0	
91.50	91.80	0.30	22.00	*****	1	3.33	8	26.67	0	
91.80	92.10	0.30	21.00	*****	4	13.33	19	63.33	0	
92.10	93.60	1.50	99.00	*****	15	10.00	52	34.67	0	
93.60	94.90	1.30	98.00	*****	11	8.46	42	32.31	0	
94.90	95.30	0.40	36.00	*****	6	15.00	32	80.00	0	
95.30	96.80	1.50	57.00	*****	15	10.00	34	22.67	0	
96.80	97.80	1.00	22.00	*****	13	13.00	23	23.00	0	
97.80	99.30	1.50	101.00	*****	12	8.00	22	14.67	0	
109.00	109.50	0.50	26.00	*****	10	20.00	7	14.00	0	
109.50	110.30	0.80	51.00	*****	6	7.50	16	20.00	0	
110.30	111.70	1.40	79.00	*****	12	8.57	19	13.57	0	
111.70	111.90	0.20	10.00	*****	7	35.00	26	130.00	0	
122.90	124.40	1.50	49.00	*****	19	12.67	12	8.00	0	

HOLE NUMBER: WF-92-16

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: WOLF92
PROJECT NUMBER: 673
CLAIM NUMBER:
LOCATION: BLACK FLY ZONE

PLOTTING COORDS GRID: I.P. GRID
NORTH: 97700.00N
EAST: 35300.00E
ELEV: 1183.00

ALTERNATE COORDS GRID: I.P.GRID
NORTH: 977+ 0N
EAST: 353+ 0E
ELEV: 1183.00

COLLAR DIP: -45° 0' 0"
LENGTH OF THE HOLE: 125.00m
START DEPTH: 0.00m
FINAL DEPTH: 125.00m

COLLAR GRID AZIMUTH: 90° 0' 0"

COLLAR ASTRONOMIC AZIMUTH: 90° 0' 0"

DATE STARTED: September 1, 1992
DATE COMPLETED: September 4, 1992
DATE LOGGED: September 4, 1992

COLLAR SURVEY: NO
MULTISHOT SURVEY: NO
RQD LOG: YES

PULSE EM SURVEY: NO
PLUGGED: NO
HOLE SIZE: NQ

CONTRACTOR: ATLAS DRILLING LTD
CASING: REAMED TO 2.7m
CORE STORAGE: CAMP

PURPOSE:

DIRECTIONAL DATA:

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
27.40	-	-47° 0'	ACID	OK	
64.30	-	-46° 0'	ACID	OK	
125.00	-	-45° 0'	ACID	OK	

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
-	-	-	-	-	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 2.70	«CASING»					
2.70 TO 3.30	«RUBBLE»					
3.30 TO 12.40	«QFP RHYL»	Colour: grey-orange Grain Size: f.gr. Consists of 2-3%, 1-2 mm rounded to euhedral qtz grains, 1-2% rounded fsp in poorly bedded grey to orange vitric matrix. Could possibly be QF rhyolite intrusion. Weak preferred orientation of minerals is seen. Matrix is sandy textured ⌈8.2-9.1⌋ «-weak pyritic stockwork» ⌈11.7-12.4⌋ «s-stockwork» Bottom contact @	 78	Limonitic and hematite staining are abundant throughout «s-i lim, m-s hem, m-arg» Occasional qtz veinlets cut interval. Possible pyrophyllite veinlets. Soft cream coloured veinlets - s-sil	Presence of limonitic and hematite suggest pyrite present «up to 3% pyrite» -2-3% py	
12.40 TO 17.80	«FLOW BANDED RHYL»	Colour: grey, maroon, orange Grain Size: f.gr. Minor rounded qtz fsp crystals in f.gr. banded matrix. Banding is convoluted, contorted and looks micro-spherulitic locally similar to flow banded rhyolite seen elsewhere and may be, however lamination do not appear continuous @ ⌈12.4-13.4⌋ «m-s stockwork» -minor banded, brecciated veins, generally white quartz 14.7-15.3 - s-i stockwork	 24	«s-lim, hem, m-sil» «m-s sil, m-lim» ⌈14.3-17.8⌋ «m-i sil» 14.3-14.7 s-i sil - pervasive silification of matrix - s-sil 15.3-16.7	 «tr-3% py» - tr py	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
				- s-i sil 16.7-17.8 - m-s sil	- 2-3% py	
17.80 TO 50.10	«RHYL/RYBX»	Colour: Grain size: See descrip 3.3-12.4. Strongly limonitic hematitic with minor qtz veinlets		«s-lim, hem» -minor pyrophyllite veinlets		
		╣20.5-21.3╠ «w-m stockwork»		- w-sil, s-lim		
				29.7-29.9 -pyroph bx 29.9-30.7 -i-lim, i-hem		
		╣29.7-50.1╠ «w-s stkwrk, bladed veins»		«w-i sil, loc lim, hem»		
		30.7-30.9 bladed qtz bx	50	- i-sil 30.9-32.0 s-sil, s-lim	- pyritic selvages, 1-2% py	
		32.0-32.3 w stockwork		- m sil, s-hem		
		34.0-34.3 w-stockwork		- i-lim, w-sil		
		36.0-36.5 banded qtz veins				
		37.3-37.8 sil stockwork, bladed white veins over-printed by silica		- m-sil, m-arg		
				37.8-41.6 - s-lim		
		41.6-43.1 w-stockwork				
		43.1-43.2 qtz vein	40			
		43.2-43.6 w-m stockwork		- m-sil, s-lim		
		43.6-44.0 m-s stockwork		- m-s sil, s-lim		
		44.0-45.4 w-stockwork		- w-sil, s-lim		
		45.4-46.2 s-stockwork, minor bx		- m-s sil, hem veinlets		
		46.2-47.7 m-s stockwork		- m-sil, s-lim		
		48.6-50.1 m-stockwork		- m-sil, s-lim		
50.10 TO 76.30	«FLOW BANDE D RHYL»	Colour: maroon, orange Grain Size: f.gr., m.gr. Intense to extreme limonite staining giving spotted leopard skin look to core. Strong flow banding textures seen preserved locally (contorted convoluted bands). Similar to f banded rhyolites described previously, but more continuous lamination. Banding subparallel to core axis		«w-sil, i-lim» MnO2 staining along fractures		

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		⟨55.2-66.3⟩ «w-m stockwork» 61.3-61.9 w-m stockwork 63.3-64.8 m-stockwork 64.8-66.3 m-stockwork ⟨66.3-71.9⟩ «m-s stockwork» 66.3-67.8 w-stockwork 69.2-69.9 s-stockwork - silica is massive white cryptocrystalline 70.2-71.9 m-s stockwork 72.3-74.0 -core is strongly broken		«i-lim, w-m sil» 55.2-56.7 i-lim, w-sil - i-lim, m-sil - i-lim, m-sil - i-lim, m-sil «m-sil, lim» - i-lim, w-sil - m-s sil 69.9-70.2 - s-i lim 70.2-71.9 m-sil, m-lim		
76.30 TO 87.80	«STONY RHYL »	Colour: maroon grey Grain Size: f.gr. Consists of 1-2%, 1-2 mm euhedral to anhedral qtz grain in f.gr. tuffaceous matrix. Occasional accidental to 1 cm are seen. The core is cut by a number of jigsaw breccias, cryptocrystalline qtz vein and pyrophyllite veinlets ⟨77.7-82.8⟩ «jigsaw stockwork» 77.7-78.5 jigsaw bx unrotated fragments in siliceous matrix 79.1-79.4 jigsaw bx 79.4-79.8 vein bx 82.8-87.8 -Fe oxide staining disappears almost entirely		«w-i sil, s-lim, w-hem» - m-sil, w-pyroph, s-lim - w-sil, s-lim - i-sil, w-hem 79.8-82.8 i-lim		
87.80 TO 95.00	«ASH TUFF»	Colour: grey				
TO 103.00		Grain Size: f.gr. The first 50 cm of interval contains interbeds of black chloritic argillaceous sediments. Contact is faulted @ ⟨87.8-87.85⟩ «Fault» The interval consists of f.gr. grey ??? tuffaceous sandstone. The occasional cm scale lithic frag-	58	«m-s chl»		

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		ment is seen. The matrix is quartz-rich from 87.8-94.6 {94.6-94.8} «flt bx» {95.1-95.3} «flt gouge» {95.3-96.1} «xtal lithic tuff» Bottom contact is stratigraphic subparallel to core axis	60	«s-chl»		
95.00 TO 125.00	«FLOW BANDED RHYL/RYBX»	Colour: Grain Size: Rhyodacitic in composition, relatively unaltered well banded. Consists of anhedral qtz crystals and occasional lithic fragments in a chloritic tuffaceous matrix, having a spotted texture in areas. The texture is similar to textures seen in the strongly oxidized intervals up hole. The unit is spherulitic locally {119.0-122.2} -minor stockwork {122.2-125.0} E.O.H.	28	«m-chl» A soft, waxy, creamy green mineral forms occasional veinlets, possibly pyrophyllite «w-hem, w-sl» «w-m sil, s-lim»	«w-py stockwork» «tr pyrol/psilo»	

Sample	From (m)	To (m)	Length (m)	ASSAYS Ag ppm	GEOCHEMICAL As ppm	Ba ppm	Cu ppm	Fe %	Pb ppm	Sb ppm	Zn ppm	Au ppb	Hg ppb	S %	Aug/t g/t		COMMENTS
38950	8.20	9.10	0.90	0.6	62	14	4	0.45	15	1	13	71	100	0.01			
38951	9.10	11.70	2.60	0.6	48	13	4	0.56	7	1	14	87	40	0.02			
38952	11.70	12.40	0.70	0.7	37	27	3	0.41	13	1	13	63	35	0.01			
38953	12.40	13.40	1.00	1.9	81	21	3	0.57	6	1	13	46	65	0.01			
38954	14.30	14.70	0.40	2.7	57	12	3	0.6	10	1	17	170	45	0.31			
38955	14.70	15.30	0.60	1.7	78	24	4	0.58	10	1	15	104	50	0.08			
38956	15.30	16.70	1.40	1.8	64	11	3	0.69	21	1	31	92	105	0.49			
38957	16.70	17.80	1.10	3.6	102	10	5	0.71	27	1	21	155	75	0.24			
38958	20.50	21.30	0.80	5.2	132	18	3	0.73	21	1	15	333	180	0.01			
38959	29.70	29.90	0.20	0.4	79	4	2	1.89	1	1	47	202	25	0.01			
38960	29.90	30.70	0.80	0.7	121	7	2	1.04	21	1	14	134	45	0.01			
38961	30.70	30.90	0.20	6.1	137	23	4	0.62	57	1	10	357	75	0.03			
38962	30.90	32.00	1.10	1.6	47	6	3	0.57	10	1	16	177	40	0.16			
38963	32.00	32.30	0.30	1.1	105	11	2	0.87	22	1	11	157	50	0.03			
38964	34.00	34.50	0.50	0.4	60	7	2	0.56	29	1	9	202	40	0.01			
38965	36.00	36.50	0.50	0.7	21	5	1	0.29	3	1	9	91	55	0.01			
38966	37.30	37.80	0.50	0.8	56	6	2	0.63	1	1	13	260	40	0.01			
38967	41.60	43.20	1.60	0.9	78	4	2	1.08	4	1	22	456	45	0.01			
38968	43.20	43.60	0.40	0.6	124	6	2	0.98	11	1	19	139	25	0.01			
38969	43.60	44.00	0.40	1.1	137	31	2	1.37	17	4	26	84	45	0.01			
38970	44.00	45.40	1.40	1.2	119	17	1	0.76	5	1	17	125	20	0.01			
38971	45.40	46.20	0.80	3.3	109	12	1	0.68	20	1	16	69	55	0.01			
38972	46.20	47.70	1.50	2	99	11	1	0.71	13	1	18	179	50	0.01			
38973	49.60	50.10	0.50	1	45	9	5	0.54	4	1	27	207	50	0.01			
38974	55.20	56.70	1.50	1.5	36	26	4	0.57	14	1	33	73	45	0.01			
38975	61.30	61.90	0.60	1.1	68	15	4	0.64	17	1	27	74	50	0.01			
38976	63.30	64.80	1.50	0.9	62	14	4	0.71	9	1	29	129	40	0.01			
38977	64.80	66.30	1.50	1.2	67	17	7	0.8	6	1	32	144	65	0.01			
38978	66.30	67.80	1.50	0.8	60	13	4	0.74	5	1	36	139	75	0.01			
38979	69.20	69.90	0.70	1.2	92	18	4	0.86	7	1	34	341	85	0.01			
38980	69.90	70.20	0.30	0.7	59	10	3	0.78	1	1	37	97	40	0.01			
38981	70.20	71.90	1.70	0.9	71	12	4	0.86	8	1	35	413	55	0.01			
38982	77.70	78.50	0.80	0.5	38	25	4	0.52	1	1	20	217	35	0.01			
38983	79.10	79.40	0.30	1.8	37	17	4	0.61	5	1	21	112	165	0.01			
38984	79.40	79.80	0.40	1.5	85	25	4	0.84	11	1	24	96	55	0.01			
38985	79.80	81.30	1.50	1.1	46	19	4	0.78	3	1	24	39	95	0.01			
38986	81.30	82.80	1.50	1.8	118	17	5	2.66	10	1	60	99	650	0.01			
38987	82.80	84.30	1.50	1	81	7	4	0.78	12	1	28	70	120	0.04			

Sample	From (m)	To (m)	Length (m)	Ag ppm	As ppm	Ba ppm	Cu ppm	Fe %	Pb ppm	Sb ppm	Zn ppm	Au ppb	Hg ppb	S %	Aug/t g/t
38988	120.10	121.70	1.60	1.2	143	5	4	0.73	13	1	65	47	45	0.41	
38989	121.70	122.20	0.50	1.4	173	4	4	0.64	12	1	76	22	35	0.44	
38990	122.20	123.70	1.50	1.5	126	7	4	0.99	10	1	51	58	25	0.02	
38991	123.70	125.00	1.30	0.5	57	8	4	0.68	9	1	45	92	20	0.01	

From (m)	To (m)	Length (L)	Sum Of Length S>= 0.00cm	RQD S/LX100	Number Of Fracturs	Fracturs Per Metres	Number Of Veins	Veins Per Metres	Angle	Comments
8.20	9.10	0.90	24.00	*****	21	23.33	28	31.11	0	
9.10	11.70	2.60	110.00	*****	33	12.69	54	20.77	0	
11.70	12.40	0.70	11.00	*****	15	21.43	19	27.14	0	
12.40	13.40	1.00	97.00	*****	5	5.00	43	43.00	0	
14.30	14.70	0.40	40.00	*****	0	0.00	10	25.00	0	
14.70	15.30	0.60	43.00	*****	4	6.67	15	25.00	0	
15.30	16.70	1.40	124.00	*****	10	7.14	22	15.71	0	
16.70	17.80	1.10	65.00	*****	15	13.64	23	20.91	0	
20.50	21.30	0.80	22.00	*****	15	18.75	16	20.00	0	
29.70	29.90	0.20	20.00	*****	0	0.00	5	25.00	0	
29.90	30.70	0.80	78.00	*****	1	1.25	15	18.75	0	
30.70	30.90	0.20	15.00	*****	2	10.00	10	50.00	0	
30.90	32.00	1.10	74.00	*****	6	5.45	19	17.27	0	
32.00	32.30	0.30	18.00	*****	3	10.00	12	40.00	0	
34.00	34.50	0.50	43.00	*****	2	4.00	9	18.00	0	
36.00	36.50	0.50	10.00	*****	8	16.00	6	12.00	0	
37.30	37.80	0.50	21.00	*****	10	20.00	12	24.00	0	
41.60	43.20	1.60	101.00	*****	28	17.50	27	16.87	0	
43.20	43.60	0.40	20.00	*****	5	12.50	14	35.00	0	
43.60	44.00	0.40	21.00	*****	3	7.50	11	27.50	0	
44.00	45.40	1.40	90.00	*****	13	9.29	20	14.29	0	
45.40	46.20	0.80	32.00	*****	13	16.25	34	42.50	0	
46.20	47.70	1.50	66.00	*****	25	16.67	51	34.00	0	
49.60	50.10	0.50	37.00	*****	4	8.00	17	34.00	0	
55.20	56.70	1.50	57.00	*****	22	14.67	10	6.67	0	
61.30	61.90	0.60	24.00	*****	9	15.00	8	13.33	0	
63.30	64.80	1.50	61.00	*****	22	14.67	33	22.00	0	
64.80	66.30	1.50	60.00	*****	16	10.67	34	22.67	0	
66.30	67.80	1.50	95.00	*****	15	10.00	18	12.00	0	
69.20	69.90	0.70	55.00	*****	9	12.86	18	25.71	0	
69.30	70.20	0.90	30.00	*****	0	0.00	3	3.33	0	
70.20	71.90	1.70	35.00	*****	12	7.06	8	4.71	0	
77.70	78.50	0.80	31.00	*****	10	12.50	30	37.50	0	
79.10	79.40	0.30	12.00	*****	4	13.33	11	36.67	0	
79.40	79.80	0.40	23.00	*****	7	17.50	8	20.00	0	
79.80	81.30	1.50	25.00	*****	10	6.67	25	16.67	0	
81.30	82.80	1.50	48.00	*****	11	7.33	29	19.33	0	
82.80	84.30	1.50	62.00	*****	12	8.00	31	20.67	0	
120.10	121.70	1.60	99.00	*****	19	11.88	22	13.75	0	
121.70	122.20	0.50	0.00	0.0	8	16.00	6	12.00	0	
122.20	123.70	1.50	62.00	*****	22	14.67	33	22.00	0	
123.70	125.00	1.30	10.00	769.2	25	19.23	13	10.00	0	

HOLE NUMBER: WF-92-17

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: WOLF92
PROJECT NUMBER: 673
CLAIM NUMBER:
LOCATION: BLACK FLY ZONE

PLOTTING COORDS GRID: I.P. GRID
NORTH: 97600.00N
EAST: 35350.00E
ELEV: 1168.00

ALTERNATE COORDS GRID: I.P. GRID
NORTH: 976+ 0N
EAST: 353+50E
ELEV: 1168.00

COLLAR DIP: -45° 0' 0"
LENGTH OF THE HOLE: 124.10m
START DEPTH: 0.00m
FINAL DEPTH: 124.10m

COLLAR GRID AZIMUTH: 90° 0' 0"

COLLAR ASTRONOMIC AZIMUTH: 90° 0' 0"

DATE STARTED: September 4, 1992
DATE COMPLETED: September 6, 1992
DATE LOGGED: September 6, 1992

COLLAR SURVEY: NO
MULTISHOT SURVEY: NO
RQD LOG: YES

PULSE EM SURVEY: NO
PLUGGED: NO
HOLE SIZE: NQ

CONTRACTOR: ATLAS DRILLING LTD
CASING: REAMED TO 9.1m
CORE STORAGE: CAMP

PURPOSE:

DIRECTIONAL DATA:

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
67.00	-	-47° 0'	ACID	ok	
124.10	-	-45° 0'	ACID	OK	

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
-	-	-	-	-	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 9.10	«CASING»					
9.10 TO 9.30	«RUBBLE»					
9.30 TO 38.30	«FLOW BANDED RHYL»	Colour: orange to red Grain Size: var. Limonite and hematite alteration has almost completely obliterated original textures. 2-3% qtz crystals are still visible, as are occasional rounded fragments form mm scale to lapilli size. Matrix appears glassy and corroded. Minor qtz vein lets noted. Flow banding @ ⌈35.6⌋ «FLT GOUGE» Near 35.6 hematite and limonite alteration decreases in intensity and clay alteration is dominant through lower portion	54	9.3-10.3 x-hem, clay 10.3-11.6 x-lim, clay 11.6-12.3 x-hem, clay ⌈12.3-28.3⌋ «x-lim, clay» ⌈28.3-33.8⌋ «x-hem, clay» ⌈35.6-38.3⌋ «s-clay, chl»	-minor py ⌈35.6-38.3⌋ «tr py»	
38.30 TO 41.10	«FLT GOUGE»	Generally clay gougy material with minor pyritic fragments		«x-clay»	«tr py»	
41.10 TO 42.80	«FLT BX»			«s-sil»		
42.80 TO 53.50	«QFP RHYL»	Colour: marroon, orange Grain Size: f.gr., m.gr. Fine to medium grained 3-5% euhedral to anhedral fsp, 3-5% anhedral qtz in aphanitic matrix. From 45.0-50.3 core is extremely broken, possibly faulted. Minor silica stockwork - bottom contact appears faulted		«s-lim» -possible rhodocrosite		

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
53.50 TO 78.50	«FBRY/RYBX»	Colour: grey to mauve Grain Size: f.gr. Texturally these range from massive unbanded rhyolite to strongly banded rhyolite flows. The massive units contain 10-20% euhedral to anhedral fsp and anhedral qtz grains in an aphanitic grey matrix. Flow banded segments are grey to dark grey with 10-20% anhedral qtz grains in contorted convoluted bands. In some cases these look tuffaceous with possible occasional lithic fragments. Darker grey segments contain up to 30% euhedral fsp crystals aligned with banding. Locally the unit is strongly sphaleritic		«w-sil»	«1-2% v.f.gr. py» -finely disseminated throughout	
		⟨53.5-68.1⟩ «minor py stkwrk»			«to 5% py»	
		53.5-53.9 qtz-py veins -several limonitic weathered out qtz-py veins	90	53.5-53.9 m-lim	53.5-53.9 5% py	
		55.8-56.4 w-py stockwork -stockwork, pyrite veinlets			55.8-56.4 2-3% py -as veinlets and as disseminations	
		⟨56.9-57.7⟩ «py stockwork bx» -brecciated fragments of rhyolite encapsulated in m.gr. and v.f.gr. pyrite			«5-10% py»	
				58.5-59.6 s-lim		
		66.6-68.1 -minor pyrite veinlets				
		⟨71.9-73.8⟩ «m-bladed stockwork» -stockwork bladed white qtz veins and veinlets generally oriented at common angle to c.a.	44	«w-sil» -not pervasive, just as veinlets		
		73.8-74.3 bladed banded hydrothermal vein	30	73.8-74.3 x-sil		
				⟨74.3-75.8⟩ «w-lim, spyroph» -possible pyrophyllite veinlets		
				77.1-77.2 pyrophyllite vein at 40 deg. to c.a.		

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
78.50 TO 92.40	«RHYOLITE»	Colour: grey orange Grain Size: f.gr.				
		ǂ79.8-79.9ǂ «pyroph vein» Consists of 5-10% angular broken qtz crystals 1-2 mm dimension and 2-3% fsp crystals in a grey f.gr. granular tuffaceous matrix. Occasional fiamme are seen along a faint fabric. A number of small fault breccia cut across the interval		«s-lim, s-pyroph, m-arg»		
		ǂ80.5-81.1ǂ «fault»		- w-lim		
		82.1-82.5 w-stockwork		- w-sil, lim	- tr py	
		ǂ85.2-85.6ǂ «pyritic bx» -strongly weathered	44	«m-s lim»		
		ǂ88.2-88.4ǂ «flt gouge»				
		ǂ90.1-90.6ǂ «m-s stockwork»		«m-sil»		
		91.9 -crossbedding	56			
		Bottom contact a	68			
92.40 TO 124.10	«SPHER RHYL »	Colour: grey to mauve Primarily sphaleritic rhyolite. Up to 90% mm scale spherules locally with occasional cm size occurrences. Some flow banding is noted. Occasional bladed qtz veins cut interval	34	«m-lim» ǂ92.4-97.9ǂ «w-sil veining»		
		ǂ92.4-97.9ǂ «w-sil veins» -primarily cm wide white bleached sil veinlets with minor black silicas				
		96.4-97.9 w-sil veining		ǂ97.9-100.0ǂ «m-arg, m-lim» ǂ100.0-101.6ǂ «m-s sil» 101.2-101.6 m-s sil, w-graph -graphitic fractures		

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		101.6-103.0 -very strongly convoluted banding		╣101.6-103.0╠ «s pyroph» -soft white greasy mineral pyrophyllite or talc?		
		103.3-105.0 -core is intense altered to white greasy mineral possibly pyrophyllite. Minor qtz veins are seen ╣105.0-111.2╠ «s-stockwork bladed qz str.» 105.0-105.7 -bladed silicification overprinted by sil flooding		╣103.3-105.0╠ «i-pyroph» «s-x sil» 105.0-105.7 x-sil		
		105.7-106.9 s-stockwork		105.7-106.9 s-sil, m-pyroph		
		╣110.3╠ «fault»		╣106.9-107.6╠ «s-i sil»		
		107.6-110.9 stockwork pyroph ╣111.4╠ «fault»	40	- s-i pyroph m-lim w-sil		
		110.9-111.2 s-stockwork sil		- s-sil		
		╣111.2-124.1╠ «w-m stockwork, occ. blading» -bladed qtz vein up to 10 cm and stockworks cut the core		«w-m sil, arg»		
		112.2 -several large (3-5 cm) botryoidal textures which may be large spherulites. These have a radial texture and are strongly altered to clays and possibly rhodocrosite (soft pink mineral). Feldspars in matrix about these orient themselves to the spherical shape of these structures.				
		116.3-116.5 -sil vn				
		118.0-118.2 -s-stockwork				
	E.O.H.					

Sample	From (m)	To (m)	Length (m)	ASSAYS Ag ppm	GEOCHEMICAL As ppm	Ba ppm	Cu ppm	Fe %	Pb ppm	Sb ppm	Zn ppm	Au ppb	Hg ppb	S %	Aug/t g/t	COMMENTS
38992	11.60	12.30	0.70	1.5	40	23	3	0.99	28	1	92	14	110	0.02		
38993	12.30	13.80	1.50	1.1	73	13	4	1.18	12	1	71	11	150	0.01		
38995	15.30	16.80	1.50	1	25	6	3	1.06	12	2	34	57	95	0.01		
38994	26.80	28.30	1.50	1.8	91	8	3	0.71	14	1	53	52	110	0.01		
38995	28.30	29.80	1.50	1.0	25	6	3	1.06	12	2	34	57	95	0.01		
38996	38.30	41.10	2.80	31.4	808	21	42	3.24	32	4	1588	1426	140	3.62	1.52	
38997	41.10	42.80	1.70	2.5	454	114	29	3.05	22	7	263	313	370	0.15		
38998	53.50	53.90	0.40	9	478	13	9	1.72	22	13	63	305	310	0.41		
38999	55.80	56.40	0.60	9.2	702	6	7	2.77	14	29	70	405	540	2.91		
39000	56.90	57.70	0.80	6.9	608	9	6	2.12	21	26	124	324	385	2.23		
28576	58.50	59.60	1.10	0.9	347	7	5	3.88	21	9	136	1278	115	0.08	2.32	
28577	66.60	68.10	1.50	5.4	135	4	5	0.79	23	2	105	280	265	0.65		
28578	71.90	73.80	1.90	1.5	105	4	4	0.61	16	1	37	104	80	0.34		
28579	73.80	74.30	0.50	2.7	120	12	4	0.83	24	1	25	66	215	0.14		
28580	74.30	75.80	1.50	1.7	229	6	5	1.66	32	7	59	107	845	0.29		
28581	82.10	82.50	0.40	8.1	276	5	5	1.28	10	5	30	174	1220	0.03		
28582	85.20	85.60	0.40	4.8	583	16	5	2.88	21	19	194	95	615	0.01		
28583	90.10	90.60	0.50	1.7	142	7	4	0.73	12	1	34	104	65	0.01		
28584	92.40	93.30	0.90	1.7	146	10	4	0.67	42	1	117	151	75	0.26		
28585	96.40	97.90	1.50	2.5	114	7	3	0.67	18	1	52	113	200	0.01		
28586	100.00	101.20	1.20	6.4	199	7	7	0.83	17	1	42	188	700	0.01		
28587	101.20	101.60	0.40	5.4	149	2	20	0.66	15	1	38	144	315	0.4		
28588	103.30	105.00	1.70	4.4	122	9	4	0.73	13	1	57	167	695	0.02		
28589	105.00	105.70	0.70	0.9	98	3	4	0.5	7	3	38	148	235	0.01		
28590	105.70	106.90	1.20	1.7	168	5	4	0.87	11	1	59	258	530	0.01		
28591	106.90	107.60	0.70	1.3	230	5	3	1.01	18	1	45	153	470	0.01		
28592	107.60	109.10	1.50	2	134	3	3	0.65	12	1	39	114	270	0.01		
28593	109.10	110.90	1.80	4.7	153	6	4	0.69	9	1	39	273	960	0.1		
28594	110.90	111.20	0.30	1.4	168	12	4	1.08	15	1	57	196	160	0.08		
28595	111.20	112.70	1.50	2.4	114	15	4	0.69	14	1	42	75	145	0.01		
28596	112.70	114.20	1.50	2.7	104	5	4	0.56	11	2	34	65	70	0.01		
28597	114.20	115.70	1.50	1.3	124	9	2	0.61	13	2	26	95	55	0.01		
28598	115.70	116.30	0.60	2.1	134	12	2	0.72	18	2	26	63	55	0.01		
28599	116.30	116.50	0.20	2.4	90	11	3	0.59	12	2	19	166	145	0.01		
28600	116.50	118.00	1.50	1.8	120	9	2	0.68	9	1	31	88	135	0.01		
36426	118.00	118.20	0.20	2.3	70	14	3	0.53	15	2	21	154	80	0.01		
36427	118.20	119.70	1.50	1.6	101	12	3	0.69	11	2	40	109	155	0.01		
36428	119.70	121.20	1.50	1.3	142	12	3	0.73	13	3	46	54	145	0.01		

Sample	From (m)	To (m)	Length (m)	Ag ppm	As ppm	Ba ppm	Cu ppm	Fe %	Pb ppm	Sb ppm	Zn ppm	Au ppb	Hg ppb	S %	Aug/t g/t
36429	121.20	122.70	1.50	1.1	143	7	2	0.67	9	3	40	62	125	0.01	
36430	122.70	124.10	1.40	1.6	146	10	3	0.71	13	4	43	111	170	0.04	

From (m)	To (m)	Length (L)	Sum Of Length S>= 0.00cm	RQD S/LX100	Number Of Fracturs	Fracturs Per Metres	Number Of Veins	Veins Per Metres	Angle	Comments
11.60	12.30	0.70	21.00	*****	12	17.14	0	0.00	0	
12.30	13.80	1.50	87.00	*****	19	12.67	7	4.67	0	
26.80	28.30	1.50	112.00	*****	15	10.00	22	14.67	0	
38.30	41.10	2.80	110.00	*****	15	5.36	15	5.36	0	
41.10	42.80	1.70	0.00	0.0	21	12.35	47	27.65	0	
53.50	53.90	0.40	19.00	*****	8	20.00	9	22.50	0	
55.80	56.40	0.60	33.00	*****	10	16.67	12	20.00	0	
56.90	57.70	0.80	61.00	*****	6	7.50	21	26.25	0	
58.50	59.60	1.10	73.00	*****	12	10.91	18	16.36	0	
66.60	68.10	1.50	112.00	*****	12	8.00	24	16.00	0	
71.90	73.80	1.90	121.00	*****	18	9.47	29	15.26	0	
73.80	74.30	0.50	13.00	*****	11	22.00	10	20.00	0	
74.30	75.80	1.50	81.00	*****	21	14.00	38	25.33	0	
82.10	82.50	0.40	39.00	*****	4	10.00	20	50.00	0	
85.20	85.60	0.40	0.00	0.0	4	10.00	3	7.50	0	
90.10	90.60	0.50	31.00	*****	5	10.00	11	22.00	0	
92.40	93.30	0.90	89.00	*****	5	5.56	28	31.11	0	
96.40	97.90	1.50	96.00	*****	16	10.67	18	12.00	0	
100.00	101.20	1.20	81.00	*****	13	10.83	44	36.67	0	
101.20	101.60	0.40	15.00	*****	4	10.00	15	37.50	0	
103.30	105.00	1.70	52.00	*****	24	14.12	21	12.35	0	
105.00	105.70	0.70	11.00	*****	10	14.29	8	11.43	0	
105.70	106.90	1.20	93.00	*****	10	8.33	22	18.33	0	
106.90	107.60	0.70	17.00	*****	6	8.57	9	12.86	0	
107.60	109.10	1.50	96.00	*****	15	10.00	13	8.67	0	
109.10	110.90	1.80	53.00	*****	21	11.67	33	18.33	0	
110.90	111.20	0.30	10.00	*****	2	6.67	3	10.00	0	
111.20	112.70	1.50	118.00	*****	11	7.33	21	14.00	0	
112.70	114.20	1.50	46.00	*****	21	14.00	20	13.33	0	
114.20	115.70	1.50	31.00	*****	13	8.67	11	7.33	0	
115.70	116.30	0.60	0.00	0.0	8	13.33	10	16.67	0	
116.30	116.50	0.20	13.00	*****	2	10.00	11	55.00	0	
116.50	118.00	1.50	31.00	*****	21	14.00	48	32.00	0	
118.00	118.20	0.20	0.00	0.0	3	15.00	3	15.00	0	
118.20	119.70	1.50	47.00	*****	18	12.00	12	8.00	0	
119.70	121.20	1.50	22.00	*****	23	15.33	23	15.33	0	
121.20	122.70	1.50	0.00	0.0	26	17.33	28	18.67	0	
122.70	124.10	1.40	61.00	*****	18	12.86	7	5.00	0	

HOLE NUMBER: WF-92-18

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: WOLF92
PROJECT NUMBER: 673
CLAIM NUMBER:
LOCATION: LOOKOUT ZONE

PLOTTING COORDS GRID: I.P. GRID
NORTH: 97400.00N
EAST: 36085.00E
ELEV: 1258.00

ALTERNATE COORDS GRID: I.P. GRID
NORTH: 974+ 0N
EAST: 360+85E
ELEV: 1258.00

COLLAR DIP: -60° 0' 0"
LENGTH OF THE HOLE: 148.10m
START DEPTH: 0.00m
FINAL DEPTH: 148.10m

COLLAR GRID AZIMUTH: 90° 0' 0"

COLLAR ASTRONOMIC AZIMUTH: 90° 0' 0"

DATE STARTED: September 6, 1992
DATE COMPLETED: September 8, 1992
DATE LOGGED: September 8, 1992

COLLAR SURVEY: NO
MULTISHOT SURVEY: NO
RQD LOG: YES

PULSE EM SURVEY: NO
PLUGGED: NO
HOLE SIZE: NQ

CONTRACTOR: ATLAS DRILLING LTD
CASING: REAMED TO 3.0m
CORE STORAGE: CAMP

PURPOSE:

DIRECTIONAL DATA:

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
28.00	-	-59° 0'	ACID	OK	
64.60	-	-59° 0'	ACID	OK	
140.20	-	-59° 0'	ACID	OK	

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
-	-	-	-	-	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 3.00	«CASING»					
3.00 TO 62.60	«B PORPHYRY »	Colour: maroon to grey Grain Size: m.gr. & c.gr. As for holes 7,8,9,10,13 Consists of 10-20% euhedral to anhedral medium to coarse grained feldspar crystals and 5-10% f.gr. anhedral qtz crystals in a marroon to grey v.f.gr. g'mass. Feldspars are predominantly broken. Occasional rounded lithic frags are seen. Small interval of very coarse fsp rich, quartz deficient phases with black weakly magnetic matrix cut the interval. Weakly oriented crystals - flow banding?	20	╢3.0-8.9╟ «w-lim»		
		8.9-11.8 -several strongly limonitically weathered & brecciated veins, possibly after pyrite cut the interval 11.4-11.8 -s-bx vein		╢8.9-11.8╟ «s-lim»	«tr py»	
		20.8-21.0 -minor veining		╢11.8-20.8╟ «w-lim» 20.8-21.0 w-m sil ╢21.0-23.9╟ «w-lim»		
				23.9-24.3 m-sil -pervasive, minor pyrolasite/ psilomelane along fracture surfaces		
		26.2-26.4 qtz vein -brecciated and banded	52	26.2-26.4 s-sil 26.4-32.1 w-lim, w-sil	26.2-26.4 pyrol/psilomelane? -black bladed, acicular mineral in banded vein	
		╢32.1-34.4╟ «bx veins» -silicified Rice Krispie breccia vein		«s-i sil, s-lim»		
		32.9-34.4 -minor bx veins, banded veins	50	╢32.9-34.4╟ «w-m sil» ╢34.4-39.3╟ «w-lim»		

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
				⟨39.3-40.8⟩ «w-m sil, w-pyroph»		
				⟨40.8-45.9⟩ «w-lim»		
		⟨45.9-48.9⟩ «w-m stockwork»		⟨45.9-48.9⟩ «w-sil» -some banded silica		
				⟨48.9-57.9⟩ «s-arg, s-lim»		
		58.5 -matrix becomes black, aphanitic, pyritic. Crystals are larger in size and unit may be intrusive, however crystals are still broken and occasional accidentals are still seen			⟨58.5⟩ «w-m MT, 1-2% v.f.gr. py»	
62.60 TO 65.70	«B PORPHYRY BX»	Fragment rich (10-15%), moderately chloritized porphyry breccia. Clasts are subangular to subrounded commonly rimmed. Banding @ Rather non-descript. Occasional white vuggy qtz veinlets cut the core.	50	«m-chl»	«2-3% v.f.gr. py» -pyrite is v.f.gr., disseminated throughout	
		⟨73.4-73.5⟩ «flt bx»				
		⟨73.5-81.0⟩ «w-py, chl, sil stockwork»		«m-s lim, m sil» -silicification is generally pervasive, also occurring as occasional bladed veinlets	«tr-1% py»	Beginning at 73.5-81.0 the core becomes strongly oxidized with most textures destroyed. Some lapilli remain but locally looks like qtz xtal tuff.
				81.0-81.1 s-sil	81.0-81.1 2-3% py	
				⟨81.1-82.5⟩ «w-m sil» -pervasive	«tr-3% py»	
		82.5-83.1 -w-py stockwork			82.5-83.1 2% py	
		83.6 -lower contact is stratigraphic	50			

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
65.70 TO 73.50	«G PORPHYRY BX»	Glomero porphyritic intrusive. K-feldspar pheno's form crystal aggregates up to 30mm in diameter. They lie in a medium grained groundmass consisting of quartz, plagioclase and orthoclase. Larger phen -ocrysts are strongly zoned. Chlorite pseudomorphs after biotite noted. The porphyry is crudely flow banded and brecciated. Possibly a contact zone.				
73.50 TO 83.60	«STONY RHYL QP»	Massive to autobrecciated stony rhyolite contain abundant micro-phenocrysts of quartz in an aphanit -ic groundmass. Lower Contact @	50			
83.60 TO 90.70	«HETEROLITH IC BRECCIA 2»	Colour: green to black Grain Size: var Matrix supported, poorly sorted heterolithic breccia. Fragment types are sedimentary volcanic, volcaniclastic. Minor interbeds of argillite. Not strongly consolidated Lower contact @	64	«i-x chl»		
90.70 TO 92.50	«QFP/QFP BX»	Colour: grey pink. Grain Size: m.gr. Medium grained to 1 cm fsp in a grey green to pink aphanitic matrix. Feldspars are generally broken occasionally euhedral. This unit is not the same as that described near top of hole. Approx. 30% fsp, 10% rounded qtz grains. Bottom contact @	90	«w-m chl, w-sil»		
92.50 TO 92.70	«BANDED QTZ VN»	Colour: white Grain Size: f.gr. Massive, banded and white qtz vein	40	«x-sil»		
92.70 TO 105.20	«QP RHYL BX»	Colour: grey, orange, green Grain Size: f.gr., m.gr. -Variably altered qtz porphyritic rhyolite breccia 10% fine to medium grained qtz crystals Coarser grained pink QP intervals resemble B porph yry. ǂ92.7-93.6ǂ «i-stockwork»		«s-sil, m-lim»		

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		-intensely stockwork fractured and veins, veinlets brecciated ⸤95.1-104.6⸣ «B Porphyry» ⸤95.1-105.2⸣ «m-s stockwork» -degree of stockworking and jigsaw breccia from increases toward lower contact. Some bleaching textures are seen		⸤93.6-95.1⸣ «x-ser» -green sericite alteration pervasive throughout core «m-s lim, m-sil» -degree of silicification increase toward lower contact	«tr py, pyrol/psilo»	
105.20 TO 108.20	«H'THERMAL	Colour: white		«x-sil»		88% recovery
TO 109.20	VEIN BX»	Grain Size: f.gr.				
TO 108.20						
109.20		Massive bladed and banded silicification over-printed by later stage silicification. Only minor healed breccias are seen. Fragment are completely re-silicified. Banding oriented @ 108.2-108.8 -broken, rubbly core, primarily silicified sediments 108.8-109.2 -h'thermal breccia	60			
108.20 TO 114.30	«INTERBED	Colour: grey, black			«3-5% py»	
TO 114.30	SST/ASH TUFFS»	Grain Size: f.gr. Thinly bedded f.gr. black and grey argillaceous sediments and grey ash tuffs with 2-5%, < 1 mm qtz crystals in f.gr., matrix with chloritic fiamme ⸤109.2-113.4⸣ «hydrothermal bx and vein, bladed»	38	«m-x sil, m-lim»		

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		111.2-112.1 m-stockwork -stockwork bladed veins				
		112.8-113.4 -hydrothermal vn & bx, bladed		- i-x sil, m-lim		
		{113.4-114.3} «sil flt bx» -heterolithic angular breccia		«s-sil»		
114.30 TO 131.90	«VITRIC ASH TUFF»	Colour: grey green Grain Size: f.gr. Fine grained to v.f.gr. bedded vitric ash tuff wit conspicuous chloritic fiamme.	32			
		117.4-117.5 - small hydrothermal bladed vein 118.1-118.4 - weak hydrothermal stockwork 119.5-120.3 - interval of interbedded argillaceous siltstone and sandstone	40			
		{125.6-130.5} «m-bladed vn bx»		«m-sil»		
		125.6-125.7 - bladed hydrothermal bx 127.2-127.3 - bladed hydrothermal bx				
		127.6-128.5 -bladed hydrothermal bx 130.3-130.5 -bladed hydrothermal bx		- m-s sil		
131.90 TO 135.80	«INTERBED. SILTSTONE/S ST»	Colour: black/grey Grain Size: f.gr. Fine grained black argillaceous siltstones with interbeds of grey sandstone Bedding @	38			
		Grades into underlying unit		134.6-135.1 - w-ser		

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
135.80 TO 148.10	«HETEROLITH IC BX 1»	Colour: grey Grain Size: c.gr. Alternating beds of very coarse grained sandstone and coarse matrix supported breccia. There is a fining upward sequence in the hole with the conglomerate becoming more abundant downhole [137.6-139.7] «local bladed bx & stockwork» 137.6-137.8 -bladed h'thermal bx 138.8-139.7 - bladed thermal stockwork, three bladed veins occur in interval up to 10 cm thick Conglomerate is heterolithic comprised of large (to 10 cm) rounded, granite fragments, smaller argillaceous sediment fragments, sandstones and volcaniclastic debris. Matrix is coarse grained		«s-i sil, lim» - i-sil, s-lim -s-sil, s-lim		

Sample	From (m)	To (m)	Length (m)	ASSAYS Ag ppm	GEOCHEMICAL As ppm	Ba ppm	Cu ppm	Fe %	Pb ppm	Sb ppm	Zn ppm	Au ppb	Hg ppb	S %	Aug/t g/t		COMMENTS
36431	8.90	10.40	1.50	0.1	21	33	11	1.39	11	1	143	18	25	0.03			
36432	10.40	11.40	1.00	0.1	8	54	10	1.42	13	1	175	87	25	0.01			
36433	11.40	11.80	0.40	0.1	138	781	14	9.1	41	1	533	110	45	0.02			
36434	20.80	21.00	0.20	1.5	34	38	8	1.38	7	1	118	133	30	0.01			
36435	22.40	23.90	1.50	0.1	16	44	6	1.36	10	1	128	20	35	0.01			
36436	23.90	24.30	0.40	0.3	53	28	7	1.45	12	1	66	75	30	0.01			
36437	26.20	26.40	0.20	0.1	1	20	8	0.95	15	1	162	209	35	0.02			
36438	32.10	32.90	0.80	0.1	56	23	8	1.16	7	1	76	102	35	0.01			
36439	32.90	34.40	1.50	0.1	27	24	7	1.26	7	1	133	79	20	0.02			
36440	39.30	40.80	1.50	0.1	22	14	6	1.01	6	1	87	22	20	0.01			
36441	45.90	47.40	1.50	0.2	24	25	5	1.07	4	1	70	41	45	0.01			
36442	47.40	48.90	1.50	0.1	29	31	5	1.21	5	1	90	47	35	0.01			
36443	70.00	71.50	1.50	0.1	29	22	5	1.83	7	1	116	21	40	1.25			
36444	73.50	75.00	1.50	0.6	6	14	4	0.98	9	1	60	16	30	0.02			
36445	75.00	76.50	1.50	0.7	7	7	5	0.52	11	1	53	19	45	0.23			
36446	76.50	78.00	1.50	4.3	1	17	5	0.74	10	1	67	52	50	0.01			
36447	78.00	79.50	1.50	4.4	1	17	5	0.67	12	1	64	218	25	0.01			
36448	79.50	81.00	1.50	2.3	4	23	5	0.69	21	1	56	18	20	0.02			
36449	81.00	81.10	0.10	1.8	16	5	11	0.71	32	1	36	68	15	0.14			
36450	81.10	82.50	1.40	0.6	14	6	5	0.69	22	1	49	30	25	0.38			
36451	82.50	83.10	0.60	0.6	20	6	5	0.72	17	1	76	58	45	0.47			
36452	92.50	92.70	0.20	26.2	12	103	8	0.86	5	1	35	373	40	0.03			
36453	92.70	93.60	0.90	2.9	22	22	7	0.91	6	1	38	38	20	0.01			
36454	93.60	95.10	1.50	1.7	5	15	5	0.64	13	1	63	61	45	0.01			
36455	95.10	97.60	2.50	4.6	29	10	18	0.88	6	1	49	290	30	0.06			
36456	97.60	99.10	1.50	5.2	8	17	15	0.95	10	1	78	272	20	0.01			
36457	99.10	100.60	1.50	5.2	1	14	15	0.82	2	1	91	276	25	0.01			
36458	100.60	102.10	1.50	5.3	1	15	17	1.52	1	1	154	270	20	0.01			
36459	102.10	103.60	1.50	8.5	17	13	9	0.77	2	1	85	797	25	0.02	0.81		
36460	103.60	105.20	1.60	16.5	11	32	10	0.71	5	1	59	890	35	0.01	1.02		
36461	105.20	106.70	1.50	24.3	13	54	11	0.44	6	1	29	960	30	0.01	1.01		
36462	106.70	108.20	1.50	14.2	7	70	7	0.3	7	1	20	506	20	0.01	0.53		
36463	108.20	108.80	0.60	13.9	6	58	19	0.89	11	1	90	408	55	0.01			
36464	108.80	109.20	0.40	10.9	1	74	10	0.62	10	1	61	574	50	0.01	0.63		
92181	109.20	110.00	0.80	5.8	106	59	13	1.07	11	1	97	371	80				
92182	110.00	111.20	1.20	3.8	78	36	10	1.86	17	1	123	428	35				
36465	111.20	112.10	0.90	5.0	27	29	39	2.05	14	1	201	418	50	0.56			
36466	112.10	113.40	1.30	7.3	6	35	13	1.59	9	1	99	113	45	0.03			

Sample	From (m)	To (m)	Length (m)	Ag ppm	As ppm	Ba ppm	Cu ppm	Fe %	Pb ppm	Sb ppm	Zn ppm	Au ppb	Hg ppb	S %	Aug/t g/t
92183	112.10	112.80	0.70	2.4	17	41	50	1.01	24	1	214	43	65		
36467	113.40	114.30	0.90	11.0	20	29	10	1.06	21	1	87	2230	35	0.01	2.22
92184	114.30	115.80	1.50	3.3	17	11	3	0.39	16	1	84	543	45		
92185	115.80	117.30	1.50	2.4	19	8	5	0.42	15	1	143	73	45		
92186	117.30	118.80	1.50	8.7	14	9	3	0.64	9	1	102	361	35		
92187	118.80	120.30	1.50	16.4	43	19	16	1.05	30	1	130	440	50		
92188	120.30	124.40	4.10	1.5	11	13	4	0.75	12	1	95	251	35		
92189	124.40	125.90	1.50	3.3	12	14	5	0.48	12	1	89	290	40		
21810	125.90	127.60	1.70	4.3	22	20	10	1.09	32	1	135	160	35		
36468	127.60	128.50	0.90	3.7	13	20	3	0.52	10	1	61	194	30	0.01	
21811	128.50	130.30	1.80	2.9	15	19	11	0.86	30	1	166	190	30		
36469	130.30	130.50	0.20	8.1	1	55	3	1.26	18	1	102	1330	35	0.02	1.44
21812	130.50	132.00	1.50	3.3	11	21	5	0.77	12	1	100	499	25		
21813	132.00	133.50	1.50	3.9	58	37	44	1.29	68	1	392	57	45		
21814	133.50	135.00	1.50	2.0	49	29	41	1.76	52	1	354	19	55		
21815	135.00	136.50	1.50	1.6	23	53	55	1.87	64	1	341	67	45		
21816	136.50	137.60	1.10	1.3	17	61	35	1.64	46	1	231	29	50		
36470	137.60	137.80	0.20	0.2	1	26	19	3.55	18	1	147	47	25	0.04	
21817	137.80	138.80	1.00	3.6	27	52	72	1.46	68	1	256	25	50		
36471	138.80	139.70	0.90	1.3	6	35	66	2.18	41	1	201	57	45	0.45	
21818	139.70	141.20	1.50	2.3	21	57	75	1.84	66	1	261	71	40		
21819	141.20	142.70	1.50	1.6	16	52	68	1.75	52	1	261	36	45		
21820	142.70	144.20	1.50	1.2	13	55	48	2.24	97	1	326	53	50		
21821	144.20	145.70	1.50	.6	8	49	62	2.11	46	1	360	18	60		
21822	145.70	147.20	1.50	0.7	9	42	30	2.00	29	1	201	474	45		
21823	147.20	148.10	0.90	0.1	6	42	62	2.25	26	1	189	16	40		

From (m)	To (m)	Length (L)	Sum Of Length S>= 0.00cm	RQD S/LX100	Number Of Fracturs	Fracturs Per Metres	Number Of Veins	Veins Per Metres	Angle	Comments
8.90	10.40	1.50	0.00	0.0	18	12.00	6	4.00	0	
10.40	11.40	1.00	21.00	*****	15	15.00	7	7.00	0	
11.40	11.80	0.40	0.00	0.0	5	12.50	1	2.50	0	
20.80	21.00	0.20	18.00	*****	1	5.00	3	15.00	0	
22.40	23.90	1.50	45.00	*****	16	10.67	12	8.00	0	
23.90	24.30	0.40	13.00	*****	5	12.50	10	25.00	0	
26.20	26.40	0.20	11.00	*****	1	5.00	7	35.00	0	
32.10	32.90	0.80	54.00	*****	10	12.50	21	26.25	0	
32.90	34.40	1.50	67.00	*****	17	11.33	10	6.67	0	
39.90	40.80	0.90	78.00	*****	21	23.33	13	14.44	0	
45.90	47.40	1.50	43.00	*****	25	16.67	4	2.67	0	
47.40	48.90	1.50	22.00	*****	25	16.67	14	9.33	0	
70.00	71.50	1.50	142.00	*****	12	8.00	2	1.33	0	
73.50	75.00	1.50	121.00	*****	17	11.33	16	10.67	0	
75.00	76.50	1.50	68.00	*****	14	9.33	14	9.33	0	
76.50	78.00	1.50	12.00	800.0	28	18.67	10	6.67	0	
78.00	79.50	1.50	27.00	*****	20	13.33	11	7.33	0	
79.50	81.00	1.50	24.00	*****	22	14.67	7	4.67	0	
81.00	81.10	0.10	0.00	0.0	0	0.00	5	50.00	0	
81.10	82.50	1.40	62.00	*****	12	8.57	11	7.86	0	
82.50	83.10	0.60	55.00	*****	8	13.33	26	43.33	0	
92.50	92.70	0.20	0.00	0.0	2	10.00	19	95.00	0	
92.70	93.60	0.90	0.00	0.0	22	24.44	61	67.78	0	
93.60	95.10	1.50	33.00	*****	22	14.67	10	6.67	0	
95.10	97.60	2.50	67.00	*****	42	16.80	42	16.80	0	
97.60	99.10	1.50	0.00	0.0	28	18.67	12	8.00	0	
99.10	100.60	1.50	32.00	*****	18	12.00	18	12.00	0	
100.60	102.10	1.50	0.00	0.0	22	14.67	21	14.00	0	
102.10	103.60	1.50	0.00	0.0	32	21.33	13	8.67	0	
103.60	105.20	1.60	11.00	687.5	32	20.00	32	20.00	0	
105.20	106.70	1.50	23.00	*****	27	18.00	43	28.67	0	
106.70	108.20	1.50	0.00	0.0	11	7.33	30	20.00	0	
108.20	108.80	0.60	0.00	0.0	15	25.00	10	16.67	0	
108.80	109.20	0.40	0.00	0.0	5	12.50	4	10.00	0	
111.20	112.10	0.90	89.00	*****	4	4.44	44	48.89	0	
112.80	113.40	0.60	26.00	*****	2	3.33	8	13.33	0	
113.40	114.30	0.90	47.00	*****	5	5.56	8	8.89	0	
127.60	128.50	0.90	24.00	*****	11	12.22	11	12.22	0	
130.30	130.50	0.20	11.00	*****	1	5.00	10	50.00	0	
137.60	137.80	0.20	20.00	*****	0	0.00	2	10.00	0	
138.80	139.70	0.90	26.00	*****	13	14.44	3	3.33	0	

HOLE NUMBER: WF-92-19

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: WOLF92
PROJECT NUMBER: 673
CLAIM NUMBER:
LOCATION: RIDGE/LOOKOUT ZONE

PLOTTING COORDS GRID: I.P. GRID
NORTH: 97500.00N
EAST: 36220.00E
ELEV: 1271.00

ALTERNATE COORDS GRID: I.P. GRID
NORTH: 975+ 0N
EAST: 362+20E
ELEV: 1271.00

COLLAR DIP: -55° 0' 0"
LENGTH OF THE HOLE: 125.00m
START DEPTH: 0.00m
FINAL DEPTH: 125.00m

COLLAR GRID AZIMUTH: 90° 0' 0"

COLLAR ASTRONOMIC AZIMUTH: 90° 0' 0"

DATE STARTED: September 8, 1992
DATE COMPLETED: September 9, 1992
DATE LOGGED: September 9, 1992

COLLAR SURVEY: NO
MULTISHOT SURVEY: NO
RQD LOG: YES

PULSE EM SURVEY: NO
PLUGGED: NO
HOLE SIZE: NQ

CONTRACTOR: ATLAS DRILLING LTD
CASING: REAMED 3.4m
CORE STORAGE: CAMP

PURPOSE:

DIRECTIONAL DATA:

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments	Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 3.40	«CASING»					
3.40 TO 34.70	«B PORPHYRY »	Colour: purple, maroon to grey Grain Size: f.gr., m.gr. This is a finer grained phase of the coarse grained QF porphyry described in previous holes. From 3.4-7.3 is the coarse phase. From 7.3 onward the unit consists of 10-15% anhedral fsp and <5% anhedral qtz grains in a dark purple to grey partially welded tuffaceous matrix Welding ⌈24.3-24.7⌋ «flt gouge» ⌈29.4-29.6⌋ «flt gouge» Bottom contact @ 34.7 m	 44 50 60	«w-lim» -weak limonitic staining on fracture surfaces 9.6-10.1 s-arg -also presence of soft pink clay mineral ⌈6.3-24.3⌋ «s-arg, w-m sil» -strongly bleached, qtz rich, weak to moderate pervasive silicification 32.9-33.2 -m-s lim	«tr-1% v.f.gr. py» «tr-1% py» -pyritic stockwork	
34.70 TO 36.40	«RHYL BX»	Colour: grey Grain Size: var. Consists of broken fsp crystals and subrounded lithic fragments in grey tuffaceous matrix				
36.40 TO 38.40	«QXAT/QP RHYL»	Colour: grey Grain Size: f.gr. Angular to subrounded qtz grains to 1 mm in grey fine grained tuffaceous matrix		- w-lim		
38.40 TO 58.70	«QFP RHLY»	Colour: grey Grain Size: v.c.gr. This interval is similar to what has been called fsp qtz crystal tuff in other drill holes. This is however, massive with no bedded or welded textures. Very coarse fsp occupy 20-30% of unit. These are generally euhedral, from mm scale to several centimetres. Twinned fsp are common. ⌈40.7⌋ «flt gouge» ⌈41.0⌋ «flt gouge»		⌈38.4-40.6⌋ «m-lim»	-tr py	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		Quartz crystals are present to 20% generally smokey <1-2 mm {48.4-49.1} «-w. stockwork» -some blading seen 51.4 small qtz vein 55.1-56.4 -the unit becomes finer grained with few euhedral fsp, more chloritic with weak banding which suggests it may be tuffaceous	40	- w-sil, m-s lim {55.1-56.4} «m-chl» {56.4-58.3} «s-arg, s-lim» {58.3-58.7} «m-s sil»	«2-3% py»	
58.70 TO 67.30	«XTAL VITRI C ASH TUFF»	Colour: green Grain Size: f.gr., m.gr. Consists of 30% broken fsp fragments, 1-% qtz grains in strongly chloritic, weakly welded tuffaceous matrix Bottom contact is irregular, intrusive	38	«s-chl» {60.5-67.3} «w-arg, w-chl»	«3-5% v.f.gr. py» «tr-1% py»	
67.30 TO 70.40	«QXAT»	Colour: grey to orange Grain Size: f.gr. Subrounded qtz crystals <1 mm comprising 1-2% of core in f.gr. fsp rich grey to limonitically weathered matrix. At 67.6 a small, black matrix tuff breccia cuts core 68.1-68.3 -hydrothermal bx vein 69.7-70.4 -m-stockwork		«m-s lim, m-sil» - m-sil, s-lim	«tr-1% v.f.gr. py» -finely disseminated throughout - tr pyrol/psilo - black acicular mineral	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
70.40 TO 73.10	«HYDROTHERMAL VEIN & BX»	Colour: Grain Size: Alternating hydrothermal breccia and hydrothermal vein. Breccia consists of subangular to subrounded fragments in brown silicified matrix with occasional bladed textures seen. Hydrothermal vein is generally massive white and bladed 70.4-71.7 «Bx» 71.7-73.1 «bladed vn & bx» 71.7-72.1 bladed vein 72.1-73.1 bx, minor vn		«i-x sil, m-lim» «i-sil, m-lim» «x-sil» - x-sil - i-sil	-MnO2 coating on some fractures	
73.10 TO 75.20	«STONY RHYL»	Colour: grey to orange Grain Size: f.gr. As for interval 67.3-70.4 73.1-73.8 s-i stockwork, jigsaw bx 73.8-75.2		- s-sil, m-lim «m-lim»		
75.20 TO 78.70	«TUFFACEOUS SST»	Colour: grey Grain Size: f.gr., m.gr. Grey tuffaceous sandstone consisting of sandy matrix made up of minor broken fsp, argillaceous fragments, rhyolite fragments. Some accidentals up to several cm. Occassional interbed of argillaceous siltstones. Strongly fractured with pyrophyllite (?) veinlets Bedding @ Bottom contact @	 40 60	«w-lim, m-s pyrophyllite»		
78.70 TO 89.10	«SILTSTONE SANDSTONE»	Colour: black to grey Grain Size: f.gr. Interbeded black argillaceous siltstone, tuffaceous siltstone, and sandstone. Unaltered other than small pyrophyllite(?) veinlets 78.7-80.4 -black argillaceous seds 80.4 -onward, interbedded	 48		78.7-80.4 -5% v.f.gr. diss. py	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
89.10 TO 125.00	«HETEROLITHIC BX 1»	Colour: grey green Grain Size: c.gr. Coarse grained, heterolithic, poorly sorted, matrix supported conglomerate. The most dominant fragments are granitic ranging in size from mm scale to 10 cm. These are subrounded other fragment compositions are argillite and volcanic-clastics. In areas the core is completely dis-aggregated generally due to the weathering of granitic fragments. Minor sandstone interbeds are seen. 100.6-104.6 «Andesite Dyke» 120.7-122.2 «flt bx» 122.2-125.0 Sandstone		«s-clay»		

Sample	From (m)	To (m)	Length (m)	ASSAYS Ag ppm	GEOCHEMICAL As ppm	Ba ppm	Cu ppm	Fe %	Pb ppm	Sb ppm	Zn ppm	Au ppb	Hg ppb	S %	Aug/t g/t	COMMENTS
36472	16.30	17.80	1.50	0.1	1	6	4	0.95	17	1	175	3	45	0.44		
36473	32.90	33.20	0.30	0.1	5	24	7	3.96	26	1	211	12	40	0.03		
36474	48.40	49.10	0.70	0.1	86	10	3	1.03	6	1	55	87	15	0.02		
36475	49.10	50.60	1.50	0.5	144	12	4	0.81	15	1	73	23	55	0.47		
36476	55.10	56.40	1.30	0.2	45	14	4	1.26	20	1	212	22	45	0.33		
36477	56.40	57.90	1.50	1	35	22	4	3.09	6	1	175	75	30	0.15		
36478	57.90	58.30	0.40	0.2	12	21	4	1.21	7	1	95	23	25	0.1		
36479	58.30	58.70	0.40	0.3	50	10	4	1.37	7	1	119	46	35	0.27		
36480	58.70	60.50	1.80	0.4	23	13	4	1.27	10	1	179	19	45	0.43		
36481	60.50	62.00	1.50	0.9	113	26	4	1.76	5	1	198	59	35	0.96		
36482	62.00	63.50	1.50	1	69	15	4	1.09	12	1	95	31	35	0.56		
36483	63.50	65.00	1.50	0.6	46	10	3	0.86	9	1	115	32	20	0.34		
36484	65.00	66.50	1.50	0.3	20	14	3	1.29	11	1	180	22	30	0.22		
36485	66.50	67.30	0.80	0.4	9	14	3	1.15	9	1	139	37	30	0.16		
36486	67.30	68.10	0.80	0.5	15	6	4	0.87	18	1	74	31	40	0.21		
36487	68.10	68.30	0.20	1.1	20	12	4	0.56	16	1	45	70	25	0.01		
36488	68.30	69.70	1.40	2.5	22	24	4	0.95	11	1	71	145	15	0.01		
36489	69.70	70.40	0.70	3.7	9	40	5	0.78	4	1	56	118	25	0.01		
36490	70.40	71.70	1.30	18	15	66	4	0.48	7	1	37	988	30	0.01	0.97	
36491	71.70	72.10	0.40	19.9	11	119	4	0.26	3	1	12	1535	25	0.01	1.51	
36492	72.10	73.10	1.00	29	18	89	5	0.41	8	1	35	1610	35	0.01	1.61	
36493	73.10	73.80	0.70	3.1	4	32	4	0.81	5	1	71	315	25	0.01		
36494	73.80	75.20	1.40	1.3	9	12	8	0.63	20	1	63	80	55	0.01		
36495	75.20	76.70	1.50	0.8	14	9	9	0.71	33	1	95	215	45	0.02		
36496	76.70	78.20	1.50	0.1	1	32	8	1.04	50	1	105	56	35	0.01		
36497	78.20	78.70	0.50	5.4	6	12	14	1.01	20	1	80	588	40	0.12	0.6	
36498	78.70	80.20	1.50	1.5	4	15	13	0.77	33	1	238	23	50	0.08		

From (m)	To (m)	Length (L)	Sum Of Length S>= 0.00cm	RQD S/LX100	Number Of Fracturs	Fracturs Per Metres	Number Of Veins	Veins Per Metres	Angle	Comments
16.30	17.80	1.50	0.00	0.0	56	37.33	10	6.67	0	
32.90	33.20	0.30	15.00	*****	2	6.67	1	3.33	0	
48.40	49.10	0.70	16.00	*****	8	11.43	16	22.86	0	
49.10	50.60	1.50	78.00	*****	15	10.00	3	2.00	0	
55.10	56.40	1.30	49.00	*****	15	11.54	10	7.69	0	
56.40	57.90	1.50	61.00	*****	22	14.67	8	5.33	0	
57.90	58.30	0.40	11.00	*****	18	45.00	9	22.50	0	
58.30	58.70	0.40	27.00	*****	2	5.00	5	12.50	0	
58.70	60.50	1.80	85.00	*****	22	12.22	9	5.00	0	
60.50	62.00	1.50	82.00	*****	18	12.00	13	8.67	0	
62.00	63.50	1.50	112.00	*****	14	9.33	11	7.33	0	
63.50	65.00	1.50	131.00	*****	11	7.33	22	14.67	0	
65.00	66.50	1.50	136.00	*****	14	9.33	4	2.67	0	
66.50	67.30	0.80	59.00	*****	8	10.00	5	6.25	0	
67.30	68.10	0.80	41.00	*****	4	5.00	11	13.75	0	
68.10	68.30	0.20	16.00	*****	1	5.00	8	40.00	0	
68.30	69.70	1.40	73.00	*****	14	10.00	12	8.57	0	
69.70	70.40	0.70	44.00	*****	6	8.57	11	15.71	0	
70.40	71.70	1.30	33.00	*****	22	16.92	10	7.69	0	
71.70	72.10	0.40	0.00	0.0	6	15.00	3	7.50	0	
72.10	73.10	1.00	15.00	*****	25	25.00	25	25.00	0	
73.10	73.80	0.70	11.00	*****	9	12.86	22	31.43	0	
73.80	75.20	1.40	23.00	*****	13	9.29	15	10.71	0	
75.20	76.70	1.50	33.00	*****	26	17.33	10	6.67	0	
76.70	78.20	1.50	0.00	0.0	38	25.33	14	9.33	0	
78.20	78.70	0.50	0.00	0.0	8	16.00	8	16.00	0	
78.70	80.20	1.50	31.00	*****	31	20.67	17	11.33	0	

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: WOLF92
PROJECT NUMBER: 673
CLAIM NUMBER:
LOCATION: RIDGE/LOOKOUT ZONE

PLOTTING COORDS GRID: I.P. GRID
NORTH: 97600.00N
EAST: 36150.00E
ELEV: 1248.00

ALTERNATE COORDS GRID: I.P. GRID
NORTH: 976+ ON
EAST: 361+50E
ELEV: 1248.00

COLLAR DIP: -50° 0' 0"
LENGTH OF THE HOLE: 100.00m
START DEPTH: 0.00m
FINAL DEPTH: 100.00m

COLLAR GRID AZIMUTH: 90° 0' 0"

COLLAR ASTRONOMIC AZIMUTH: 90° 0' 0"

DATE STARTED: September 9, 1992
DATE COMPLETED: September 11, 1992
DATE LOGGED: September 12, 1992

COLLAR SURVEY: NO
MULTISHOT SURVEY: NO
RQD LOG: YES

PULSE EM SURVEY: NO
PLUGGED: NO
HOLE SIZE: NQ

CONTRACTOR: ATLAS DRILLING LTD
CASING:
CORE STORAGE: CAMP

PURPOSE:

DIRECTIONAL DATA:

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments	Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 3.10	«CASING»					
3.10 TO 59.20	«B PORPHYRY »	Colour: grey to massive Grain Size: f.gr. Subrounded fine grained euhedral to anhedral qtz and fsp crystals in very f.gr., very weakly locally banded fine grained groundmass. -very non descript 17.8-18.4 - weak stockwork ╟31.4-32.2╢ «gouge» ╟43.1-56.8╢ «jigsaw breccia/stwk» 48.9-49.2 - weak hydrothermal bx from 49.2 open fracturing increases ╟56.8-59.2╢ «min bx, stockwork» 56.8-57.3 -w-m bx and stockwork 58.2-59.2 - w-m stockwork and bx Bottom contact @	40 50	«w-arg, w-lim» ╟3.1-18.0╢ «w-m lim» - w-sil «s-clay» «w-m sil» - w-m sil - w-m sil	«tr v.f.gr. py» - 5-10% py, pyritic matrix	
59.20 TO 62.50	«HYDROTHERMAL BX»	Colour: white to black Grain Size: var. Angular to rounded fragments of varying lithologies, primarily argillite with minor volcaniclastics in silicified matrix. Degree of brecciation and silicification not as intense as in other holes. No banded textures seen. 60.4-61.1 m-stockwork 61.1-62.5 minor blading		«s-i sil, w-ser»	«tr py»	Good core recovery overall. From 61.1-61.6: 60% recovery

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		Fragments within matrix are not silicified Bottom contact @	50			
62.50 TO 68.00	«ARGILLACEOUS SILTSTONE/SST»	Colour: black Grain Size: f.gr. Interbedded, black argillaceous siltstone and argillaceous sandstone. Core is extremely rubbly 62.5-62.6 -sedimentary bx		62.5-62.9 - w-sil	«2-3% v.f.gr. py»	63.3-68.3 -core recovery 56%
68.00 TO 71.90	«TUFFACEOUS SILTSTONE»	Colour: green Grain Size: v.f.gr. Massive to weakly bedded, very fine grained chloritic tuffaceous siltstones		«w-m chl»		
71.90 TO 72.70	«ARGILLACEOUS SILTSTONE»	Colour: black Grain Size: v.f.gr. Black, massive, weakly bedded with minor sedimentary breccia textures. Grades into underlying contact				
72.70 TO 82.90	«INTERBEDDED SST/CGL»	Colour; grey green Grain Size: f.gr. to c.gr. From 72.7-75.8 the interval is fine to medium, grained tuffaceous sandstone. Unit becomes coarser downhole. No strong bedding orientations seen. At 75.8 fragments of varying lithology up to several centimetre in dimension increase in abundance. These are subangular to subrounded, argillaceous siltstones, sandstones and volcaniclastics				
82.90 TO 85.90	«TUFFACEOUS SILTSTONES»	Colour: green grey Grain Size: v.f.gr. Massive, very fine grained interval with occasional accidental fragment to .5 cm		«m-chl, w-ser»		

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
85.90 TO 88.40	«HETEROLITHIC BX 1»	Colour: green, black Grain Size: var. Consists of subrounded to subangular heterolithic fragments in a black, argillaceous matrix. Large granitic fragments up to 10 cm are abundant and distinctive. A wispy, bedded, flowlike texture is seen with fragments aligning along a common orientation. Resembles a welding texture Bottom contact is brecciated and silicified	46 40			
88.40 TO 99.60	«FP DYKE»	Colour: grey Grain Size; c.gr., v.f.gr. Consists of 20-30% euhedral fsp ranging from mm scale to 1 cm. Randomly oriented in a grey very fine grained groundmass. Feldspars are seen twinned and zoned. Some show perthitic textures		«w-clay, chl» -feldspars are altered to clay chlorite	«tr py»	
99.60 TO 100.00	«HETEROLITHIC BX 2» E.O.H.	Colour: grey green Grain Size: var. Subrounded to subangular fragments in sandy matrix 99.6-99.9 - m-bx		- m-sil		

Sample	From (m)	To (m)	Length (m)	ASSAYS Ag ppm	GEOCHEMICAL As ppm	Ba ppm	Cu ppm	Fe %	Pb ppm	Sb ppm	Zn ppm	Au ppb	Hg ppb	S %	Aug/t g/t		COMMENTS
36499	11.80	13.30	1.50	0.3	12	4	3	0.84	37	1	22	18	55	0.01			
36500	17.80	18.40	0.60	0.8	12	3	4	0.58	17	1	28	42	60	0.06			
36501	35.40	36.40	1.00	0.7	16	3	3	0.61	28	1	172	18	95	0.42			
36502	43.10	43.30	0.20	0.7	21	8	3	0.69	28	1	169	30	45	0.54			
36503	48.90	49.20	0.30	0.4	14	7	5	0.71	10	1	49	26	40	0.04			
36504	49.20	50.70	1.50	0.5	16	18	4	0.49	21	1	70	21	25	0.29			
36505	50.70	52.20	1.50	0.5	14	8	4	0.47	15	1	55	14	40	0.18			
36506	52.20	53.70	1.50	0.8	16	9	5	0.54	25	1	76	31	35	0.16			
36507	53.70	55.20	1.50	1.7	19	8	5	0.55	9	1	37	119	15	0.06			
36508	55.20	56.80	1.60	1.1	26	7	4	0.48	16	1	59	80	30	0.17			
36509	56.80	58.20	1.40	1	17	6	3	0.52	25	1	68	55	50	0.28			
36510	58.20	59.20	1.00	1.7	17	7	4	0.53	17	1	63	130	60	0.37			
36511	59.20	60.40	1.20	3	31	11	6	0.52	11	1	29	120	30	0.09			
36512	60.40	61.10	0.70	1.4	15	6	4	0.37	20	1	62	164	35	0.12			
36513	61.10	62.50	1.40	1.3	13	12	4	0.26	14	1	20	333	25	0.03			
36514	62.50	62.90	0.40	2.8	38	19	10	0.53	31	1	172	265	50	0.44			
36515	62.90	64.40	1.50	2.3	26	24	35	0.85	52	1	236	24	55	0.33			
36516	85.90	86.40	0.50	3	24	30	14	2.1	14	1	96	27	35	0.76			
36517	86.40	88.40	2.00	1	11	30	19	1.93	22	1	83	33	45	0.34			
36518	93.30	94.80	1.50	0.1	1	66	6	3.05	20	1	81	7	45	0.27			
36519	99.60	99.80	0.20	1	7	35	13	1.28	22	1	43	10	25	0.13			

From (m)	To (m)	Length (L)	Sum Of Length S>= 0.00cm	RQD S/LX100	Number Of Fracturs	Fracturs Per Metres	Number Of Veins	Veins Per Metres	Angle	Comments
11.80	13.30	1.50	101.00	*****	13	8.67	10	6.67	0	
17.80	18.40	0.60	28.00	*****	6	10.00	9	15.00	0	
35.40	36.40	1.00	94.00	*****	8	8.00	0	0.00	0	
43.10	43.30	0.20	10.00	*****	1	5.00	14	70.00	0	
48.90	49.20	0.30	0.00	0.0	2	6.67	2	6.67	0	
49.20	50.70	1.50	44.00	*****	15	10.00	5	3.33	0	
50.70	52.20	1.50	89.00	*****	21	14.00	13	8.67	0	
52.20	53.70	1.50	96.00	*****	7	4.67	14	9.33	0	
53.70	55.20	1.50	0.00	0.0	31	20.67	22	14.67	0	
55.20	56.80	1.60	62.00	*****	16	10.00	23	14.37	0	
56.80	58.20	1.40	74.00	*****	24	17.14	42	30.00	0	
58.20	59.20	1.00	38.00	*****	6	6.00	28	28.00	0	
59.20	60.40	1.20	11.00	916.7	20	16.67	46	38.33	0	
60.40	61.10	0.70	31.00	*****	8	11.43	15	21.43	0	
61.10	62.50	1.40	36.00	*****	15	10.71	11	7.86	0	
62.50	62.90	0.40	0.00	0.0	4	10.00	4	10.00	0	
62.90	64.40	1.50	0.00	0.0	27	18.00	7	4.67	0	
85.90	86.40	0.50	47.00	*****	2	4.00	0	0.00	0	
86.40	88.40	2.00	78.00	*****	11	5.50	22	11.00	0	
90.40	92.40	2.00	0.00	0.0	0	0.00	0	0.00	0	
93.30	94.80	1.50	21.00	*****	18	12.00	0	0.00	0	
99.60	99.80	0.20	11.00	*****	1	5.00	5	25.00	0	

HOLE NUMBER: WF-92-21

MINNOVA INC.
DRILL HOLE RECORD

IMPERIAL UNITS: METRIC UNITS: X

PROJECT NAME: WOLF92
PROJECT NUMBER: 673
CLAIM NUMBER:
LOCATION: POND ZONE

PLOTTING COORDS GRID: I.P. GRID
NORTH: 96975.00N
EAST: 36400.00E
ELEV: 1265.00

ALTERNATE COORDS GRID: I.P. GRID
NORTH: 969+75N
EAST: 364+ 0E
ELEV: 1265.00

COLLAR DIP: -60° 0' 0"
LENGTH OF THE HOLE: 149.40m
START DEPTH: 0.00m
FINAL DEPTH: 149.40m

COLLAR GRID AZIMUTH: 90° 0' 0"
COLLAR ASTRONOMIC AZIMUTH: 90° 0' 0"

DATE STARTED: September 11, 1992
DATE COMPLETED: September 14, 1992
DATE LOGGED: September 14, 1992

COLLAR SURVEY: NO
MULTISHOT SURVEY: NO
RQD LOG: YES

PULSE EM SURVEY: NO
PLUGGED: NO
HOLE SIZE: NQ

CONTRACTOR: ATLAS DRILLING LTD.
CASING:
CORE STORAGE: CAMP

PURPOSE: 100M WEST STEP OUT FROM HOLE 85-06

DIRECTIONAL DATA:

Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments	Depth (m)	Astronomic Azimuth	Dip degrees	Type of Test	FLAG	Comments
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	
-	-	-	-	-		-	-	-	-	-	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 3.10	«CASING»					
3.10 TO 105.60	«B PORPHYRY »	Colour: grey green Grain Size: f.gr., c.gr. Alternating between oxidized and unoxidized weakly silicified intrvals this unit consists generally of 5-10%, v.c.gr. wuhedral fsp phenocrysts up to 3 cm in dimension within a grey, f.gr. to aphanitic fsp-rich groundmass. Similar to fsp qtz crystal tuff in areas.		Alteration varies between oxidation and weak silicification. Minor vuggy drusy banded qtz lined cavities are seen and occasional qtz stringers cut the interval Manganese oxide minerals are seen on fracture surfaces ┤4.5-8.8├ «s-lim» ┤8.8-11.8├ «w-sil» ┤11.8-15.0├ «m-lim» ┤15.0-25.6├ «w-sil» ┤25.6-29.0├ «w-lim» ┤29.0-30.5├ «m-sil» ┤30.5-32.1├ «w-sil» ┤32.1-37.8├ «w-arg, w-lim»	«1% v.f.gr. py»	
		At 34.8, bladed qtz vein 5 cm wide	45			
		40.5-40.8 - w-stockwork		- fsp altered to green sericite, weakly throughout, m-sil		
		┤45.0-48.0├ «w-stockwork»		┤40.8-44.2├ «w-lim» «m-arg, w-sil»		
		┤48.8-49.6├ «m-stockwork» -minor bx		┤47.2-64.3├ «s-arg» «m-arg, lim, m-sil»		
		┤59.1-68.4├ «intermittent bx vns + stkwrk»		«local i-x sil»	«locally 5% py»	From 47.2 onward unit strongly resembles FQXT and this may be an interbed.
		59.1-59.4 - hydrothermal bx vn - footwall selvage is banded white and dark silica	32	- i-x sil		Matrix is purple to mauve. Feldspar are generlly subhedral although some twinning is still seen. Matrix looks crystal rich, tuffaceous
		64.4-65.2 - w-m stockwork		- s-sil, s-lim, pervasive		58.1-59.2: 25% recovery
		65.2-65.4 - hydrothermal bx - completely silicified, brecciated fragments,	40	- x-sil	- 5% v.f.gr. py	

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		dark sil, bladed				
		65.4-68.4 - w-m stockwork, banded veinlets		- m-sil		
		⌈71.6-77.6⌋ «w-stockwork» -occasional banded veinlets ⌈77.6-80.6⌋ «w-m stockwork» -interval cut by occasional weakly banded and bladed veins to 3 cm wide		«w-m arg, w-lim» «w-sil, w-arg, w-lim» - feldspars altered to a clay green sericite		
		⌈80.6-83.5⌋ «m-stockwork, bladed veins»		«m-i sil, w-lim»	«tr pyrol/psilo»	
		80.6-81.1 -m-stockwork, bladed veins 81.1-81.9 - w-stockwork 81.9-82.4 - m-stockwork, bladed veins 82.4-82.6 - bladed vein bx 82.6-83.5 - w-m stockwork, banded veins @	60	- m-sil, w-lim - w-sil - i-sil «i-sil»	- tr pyrol/psilo	
		⌈83.5-84.2⌋ «hydrothermal bn» -white banded and bladed vein, resilicified, weakly brecciated				
		⌈84.2-85.2⌋ «w-stockwork»		«w-sil, w-lim» 85.2-86.1 s-i arg		
		⌈86.1-89.3⌋ «m stockwork and blading»		«w-m sil, w-lim» -possible amethyst. Silicification is white to dark grey		
		⌈89.3-89.7⌋ «h'thermal vn» -white semi-massive, weakly banded but overprinted by silica. Selvages are brecciated		«x-sil»		
		⌈89.7-105.3⌋ «m-s stockwork + vn» 89.7-90.6 m-s stockwork 90.6-93.3 m-s bladed stockwork 93.3-93.5 h'thermal vn, weakly banded overprinted by silica 93.5-94.6 m-s stockwork 94.6-95.8 m-stockwork 95.8-105.3 m-s stockwork, local bladed sil veins to 3 cm		«m-x sil, m-lim» - m-sil, w-m lim - m-sil, m-s arg - x-sil - m-sil, s-arg, m-lim - i-arg, w-m sil - m-s sil, w-lim		

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		{105.3-105.6} «sil bx» -possibly fault bx		«x-sil»		
105.60 TO 106.40	«FAULT BX»	Colour: black Grain Size: var. Clay rich gougy material with subangular to subrounded fragments		«s-clay»		
106.40 TO 106.90	«TUFFACEOUS SILTSTONE»	Colour: green Grain Size: f.gr. Fine grained unbedded chloritic, pyritic tuffaceous siltstone		«s-chl»	«5-10% v.f.gr. py»	
106.90 TO 115.80	«LITHIC CRYSTAL TUFF»	Colour: black Grain Size: var. Consists of angular volcanic (mainly rhyolite) fragments (up to 5 cm)in a tuffaceous matrix consisting of crystals and ash sized lithic clasts .Lower 5m of interval is rubbly (fault ?). Abundant vitric shards noted. Possible flattened pumice.		«w-chl»		106.9-108.4: 50% recovery
115.80 TO 143.30	«LAPILLI TUFF»»	Colour: grey Grain Size: var. Lapilli sized lithic fragments in a grey fine to medium grained tuffaceous matrix. Frags are subrounded to subangular and flattened in a number of places. Minor welding textures are seen as are eutaxitic and devitrification textures {135.6-135.7} «Hand sample» QFP rhyolite lapilli. 138.4 welding @	40	Minor pyrophyllite on some fracturs	«5% diss py»	Hand sample at 135.6m. QFP rhyolite lapilli are conspicuous. Could be a facies equivalent of the massive rhyolite unit.
143.30 TO 146.40	«MAFIC DYKE»	Colour: green Grain Size: v.f.gr. Massive, dark green, v.f.gr. structureless unit that may be a mafic (microdioritic) dyke. Felty groundmass possibly made up of f.gr. feldspars, Occasional 1 mm euhedral feldspar phenocrysts Upper and lower contacts are faulted				
146.40 TO 149.40	«WELDED TUFF»	Colour: grey Grain Size: m.gr. Dark grey with occasional chloritic veinlets strongly, welded tuff showing good eutaxitic structure. Occasional lapilli size fragments				

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
	E.O.H.	Welding fabric @ 148.1m	25			

Sample	From (m)	To (m)	Length (m)	ASSAYS Ag ppm	GEOCHEMICAL As ppm	Ba ppm	Cu ppm	Fe %	Pb ppm	Sb ppm	Zn ppm	Au ppb	Hg ppb	S %	Aug/t g/t		COMMENTS
36520	4.50	6.00	1.50	0.3	10	21	5	1.39	14	1	101	21	35	0.04			
36521	8.80	10.30	1.50	0.1	23	10	4	1.07	10	1	87	22	25	0.37			
36522	29.00	30.50	1.50	0.6	17	14	5	0.87	13	1	63	23	15	0.1			
36523	34.30	35.30	1.00	0.6	5	15	4	0.55	7	1	60	55	25	0.03			
36524	39.00	40.50	1.50	0.3	22	13	4	0.83	9	1	105	24	30	0.01			
36525	40.50	40.80	0.30	0.7	24	15	5	0.88	10	1	68	60	30	0.01			
36526	40.80	42.20	1.40	0.4	23	20	4	1.15	8	1	127	24	35	0.01			
36527	45.00	46.50	1.50	0.7	21	11	4	0.74	9	1	102	166	30	0.01			
36528	46.50	48.00	1.50	1	27	26	4	1.08	16	1	113	31	25	0.01			
36529	48.80	49.60	0.80	10.9	22	26	5	0.63	20	1	74	349	35	0.01			
36530	57.40	59.10	1.70	0.7	20	34	5	0.84	2	1	99	54	25	0.01			
36531	59.10	59.40	0.30	4.3	15	17	4	0.35	5	1	21	976	20	0.02	0.95		
36532	59.40	60.90	1.50	0.8	21	27	5	0.75	1	1	87	27	20	0.01			
36533	64.40	65.20	0.80	1.3	45	20	5	1.56	12	1	73	126	40	0.02			
36534	65.20	65.40	0.20	18.7	61	15	5	0.9	16	1	17	1033	25	0.24			
36535	65.40	66.90	1.50	0.7	45	13	4	1.01	7	1	53	64	20	0.19			
36536	66.90	68.40	1.50	0.9	40	14	4	0.95	9	1	59	30	45	0.05			
36537	73.90	75.40	1.50	0.5	28	13	4	1	8	1	80	40	20	0.01			
36538	76.10	77.60	1.50	0.5	22	24	5	1.16	10	1	74	36	25	0.01			
36539	77.60	79.10	1.50	1.5	29	10	4	0.88	10	1	56	26	20	0.02			
36540	79.10	80.60	1.50	0.7	17	13	3	1.12	10	1	103	38	45	0.01			
36541	80.60	81.10	0.50	0.9	10	21	5	1.21	10	1	116	61	30	0.01			
36542	81.10	81.90	0.80	1.3	19	50	6	1.12	126	1	106	182	35	0.01			
36543	81.90	82.40	0.50	0.9	8	14	4	0.72	10	1	63	114	30	0.01			
36544	82.40	82.60	0.20	1.8	20	7	6	0.56	5	1	34	196	25	0.02			
36545	82.60	83.50	0.90	1.6	17	13	5	0.83	9	1	75	108	35	0.01			
36546	83.50	84.20	0.70	0.9	13	9	4	0.52	5	1	36	149	20	0.01			
36547	84.20	85.20	1.00	0.7	18	28	4	1.32	6	1	138	52	35	0.01			
36548	85.20	86.10	0.90	0.6	30	27	4	0.74	7	1	62	47	30	0.01			
36549	86.10	87.60	1.50	0.9	22	19	5	1	6	1	115	76	25	0.01			
36550	87.60	89.30	1.70	1.7	38	19	5	0.89	2	1	99	135	15	0.01			
36551	89.30	89.70	0.40	7.4	19	10	4	0.4	2	1	29	54	20	0.01			
36552	89.70	90.60	0.90	2.6	53	26	5	1.98	4	1	146	88	15	0.01			
36553	90.60	92.10	1.50	0.7	22	80	4	1.03	4	1	91	57	70	0.02			
36554	92.10	93.30	1.20	1.6	49	10	4	0.96	4	1	55	168	45	0.01			
36555	93.30	93.50	0.20	2.7	40	9	5	1.13	3	1	50	150	35	0.01			
36556	93.50	94.60	1.10	1.5	84	7	5	1.57	4	1	110	107	10	0.01			
36557	94.60	95.80	1.20	1.7	50	11	4	0.79	8	1	25	74	15	0.02			

Sample	From (m)	To (m)	Length (m)	Ag ppm	As ppm	Ba ppm	Cu ppm	Fe %	Pb ppm	Sb ppm	Zn ppm	Au ppb	Hg ppb	S %	Aug/t g/t
36558	95.80	97.30	1.50	1.4	42	20	4	0.42	5	1	20	64	50	0.01	
36559	97.30	98.80	1.50	1.1	46	16	4	1.12	7	1	43	127	35	0.01	
36560	98.80	100.30	1.50	1.1	34	13	4	1.75	7	1	87	184	25	0.01	
36561	100.30	101.80	1.50	1.6	23	13	4	0.78	5	1	65	97	20	0.01	
36562	101.80	103.30	1.50	0.9	24	13	46	0.61	1	1	67	18	35	0.02	
36563	103.30	104.80	1.50	3.3	31	14	5	0.56	1	1	40	68	25	0.01	
36564	104.80	105.30	0.50	2.5	14	25	5	0.58	4	1	41	52	30	0.02	
36565	105.30	105.60	0.30	3.1	12	41	5	0.61	2	1	39	57	25	0.04	
36566	105.60	106.40	0.80	4.8	29	203	9	1.47	9	1	110	63	30	0.38	
36567	106.40	106.90	0.50	0.1	1	685	14	5.26	1	1	170	221	50	1.12	
36568	106.90	108.40	1.50	1.3	14	16	5	1.7	13	1	110	43	45	0.89	
36569	124.40	125.90	1.50	0.1	1	17	5	1.3	8	1	92	121	20	0.1	

From (m)	To (m)	Length (L)	Sum Of Length S>= 0.00cm	RQD S/LX100	Number Of Fracturs	Fracturs Per Metres	Number Of Veins	Veins Per Metres	Angle	Comments
0.00	0.00	0.00	0.00	0	0	0	0	0	0	
4.50	6.00	1.50	89.00	*****	21	14.00	9	6.00	0	
8.80	10.30	1.50	132.00	*****	10	6.67	5	3.33	0	
29.00	30.50	1.50	145.00	*****	9	6.00	19	12.67	0	
34.30	35.30	1.00	62.00	*****	13	13.00	13	13.00	0	
39.00	40.50	1.50	101.00	*****	19	12.67	6	4.00	0	
40.50	40.80	0.30	13.00	*****	2	6.67	10	33.33	0	
40.80	42.20	1.40	47.00	*****	22	15.71	8	5.71	0	
45.00	46.50	1.50	29.00	*****	20	13.33	14	9.33	0	
46.50	48.00	1.50	81.00	*****	18	12.00	16	10.67	0	
48.80	49.60	0.80	78.00	*****	2	2.50	17	21.25	0	
57.40	59.10	1.70	0.00	0.0	21	12.35	5	2.94	0	
59.10	59.40	0.30	12.00	*****	2	6.67	32	106.67	0	
59.40	60.90	1.50	0.00	0.0	5	3.33	41	27.33	0	
64.40	65.20	0.80	68.00	*****	4	5.00	27	33.75	0	
65.20	65.40	0.20	18.00	*****	1	5.00	18	90.00	0	
65.40	66.90	1.50	141.00	*****	8	5.33	20	13.33	0	
66.90	68.40	1.50	138.00	*****	12	8.00	12	8.00	0	
73.90	75.40	1.50	59.00	*****	18	12.00	11	7.33	0	
76.10	77.60	1.50	122.00	*****	11	7.33	11	7.33	0	
77.60	79.10	1.50	93.00	*****	13	8.67	16	10.67	0	
79.10	80.60	1.50	104.00	*****	12	8.00	5	3.33	0	
80.60	81.10	0.50	48.00	*****	1	2.00	9	18.00	0	
81.10	81.90	0.80	73.00	*****	4	5.00	11	13.75	0	
81.90	82.40	0.50	49.00	*****	1	2.00	17	34.00	0	
82.40	82.60	0.20	0.00	0.0	1	5.00	8	40.00	0	
82.60	83.50	0.90	3.00	333.3	18	20.00	29	32.22	0	
83.50	84.20	0.70	22.00	*****	4	5.71	21	30.00	0	
84.20	85.20	1.00	88.00	*****	7	7.00	19	19.00	0	
85.20	86.10	0.90	51.00	*****	8	8.89	36	40.00	0	
86.10	87.60	1.50	94.00	*****	14	9.33	44	29.33	0	
87.60	89.30	1.70	12.00	705.9	30	17.65	52	30.59	0	
89.30	89.70	0.40	40.00	*****	2	5.00	12	30.00	0	
89.70	90.60	0.90	72.00	*****	8	8.89	48	53.33	0	
90.60	92.10	1.50	53.00	*****	9	6.00	30	20.00	0	
92.10	93.30	1.20	84.00	*****	13	10.83	86	71.67	0	
93.30	93.50	0.20	13.00	*****	3	15.00	22	110.00	0	
93.50	94.60	1.10	73.00	*****	14	12.73	43	39.09	0	
94.60	95.80	1.20	68.00	*****	15	12.50	41	34.17	0	
95.80	97.30	1.50	105.00	*****	11	7.33	31	20.67	0	
97.30	98.80	1.50	83.00	*****	16	10.67	25	16.67	0	
98.80	100.30	1.50	84.00	*****	11	7.33	23	15.33	0	
100.30	101.80	1.50	78.00	*****	21	14.00	35	23.33	0	
101.80	103.30	1.50	112.00	*****	12	8.00	50	33.33	0	

From (m)	To (m)	Length (L)	Sum Of Length S>= 0.00cm	RQD S/LX100	Number Of Fracturs	Fracturs Per Metres	Number Of Veins	Veins Per Metres	Angle	Comments
103.30	104.80	1.50	0.00	0.0	21	14.00	34	22.67	0	
104.80	105.30	0.50	0.00	0.0	8	16.00	18	36.00	0	
105.30	105.60	0.30	30.00	*****	1	3.33	10	33.33	0	
124.40	125.90	1.50	45.00	*****	26	17.33	5	3.33	0	

APPENDIX B:

STATEMENT OF COSTS

STATEMENT OF COSTS

DIRECT DRILLING COSTS		
Atlas Drilling Ltd.:		
2002m @ $46.01/m		$92,103
PERSONNEL		
Cam Clayton (Project Geologist):		
43 days @ $150/day		$6,450
Tara Case (Core Splitter):		
9 days @ $115/day		$2,185
Logan Kelly (Field Assistant):		
4 days @ $115/day		$1,610
Jan Tindal (Cook):		
43 days @ $125/day		$5,375
ANALYSES		
Minen Labs., North Vancouver:		
709 samples (Ag, As, Ba, Cu, Pb, Sb, Zn, Au, Hg, S) @ $32.00/sample		$22,702
FIELD EXPENSES		
Meals and Accommodation:		
119 mandays @ $25 /day		$2,975
Vehicles:		
2 4x4 vehicles - 43 days @ $50/day each		4,300
Travel Expenses:		$233
SUPERVISION		
Dave Heberlein (Senior Project Geologist):		
14 days @ $250 /day		$3,500
MISCELLANEOUS		
Report Preparation:		$250
Drafting:		$250
	TOTAL	**$141,933**

APPENDIX C:

STATEMENT OF QUALIFICATIONS

STATEMENT OF QUALIFICATIONS

I, David Heberlein of 12221 Makinson Street, Maple Ridge, B.C. certify that:

1. I graduated from the University of Southampton, England with a B.Sc (Honours) Degree in Geology in 1980.

2. I graduated from the University of British Columbia with an M.Sc Degree in Geology in 1985.

3. I have practised my profession continuously since my graduation.

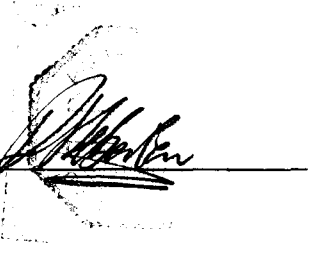
4. I am a Registered Professional Geoscientist of the Province of British Columbia

5. I am currently employed by Metall Mining Corporation. as a Senior Project Geologist.

6. When the work described in this report was carried out I was employed by Minniva Inc. as a Senior Project Geologist.

7 Work described in this report was carried out under my direct supervision.

Date: October 15, 1993

Signature: 

WOLF 2
WOLF 8
WOLF
WOLF 7
WOLF 9
WOLF 10
WOLF 3
WOLF 5
WOLF 6
WF92-14
WF92-12
WF92-15
WF92-11
WF92-16
WF92-17
WF92-20
WF92-19
WF92-7
WF92-18
WF92-8
WF92-10
WF92-13
WF92-9
WF92-21
CORE STORAGE

SHEET INDEX

1	2

SHEET 2

GRID NORTH
TRUE NORTH
1°48'

Drill Hole Location

FIG 2
WOLF PROJECT
DRILL HOLE
LOCATION MAP

CONTOUR INTERVAL 10 m
1:10,000

DRH OCT.1993

EAGLE MAPPING SERVICES LTD.