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Diamond Drilling Assessment Report
on the
Mt. Mahon Property

Fort Steele Mining Division

NTS 82G/4

Lat. 49° 08' N Long. 115° 55' W

Owners:

Chevron Minerals Ltd.
St. Eugene Mining Corporation Limited

Operator:

Minnova Inc.

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

22,197

Colin Burge
Minnova Inc.

Vancouver, B.C.
March, 1992

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INTRODUCTION

The Mt. Mahon South claim group consists of six claims totalling 100 units. The claims comprise the southern half of the Mt. Mahon property located 10 km east of Yahk, B.C.

The Mt. Mahon property is underlain by Proterozoic-age Aldridge formation sediments and intrusions which host the giant Sullivan Pb-Zn massive sulphide deposit 65 km to the north.

The Sullivan deposit occurs at the contact between the Lower and Middle Aldridge formations and this contact represents the principal target in the belt. The Mt. Mahon property covers some six kilometres of strike of "Sullivan time" and the 1991 drill program explored this stratigraphy.

Location and Access

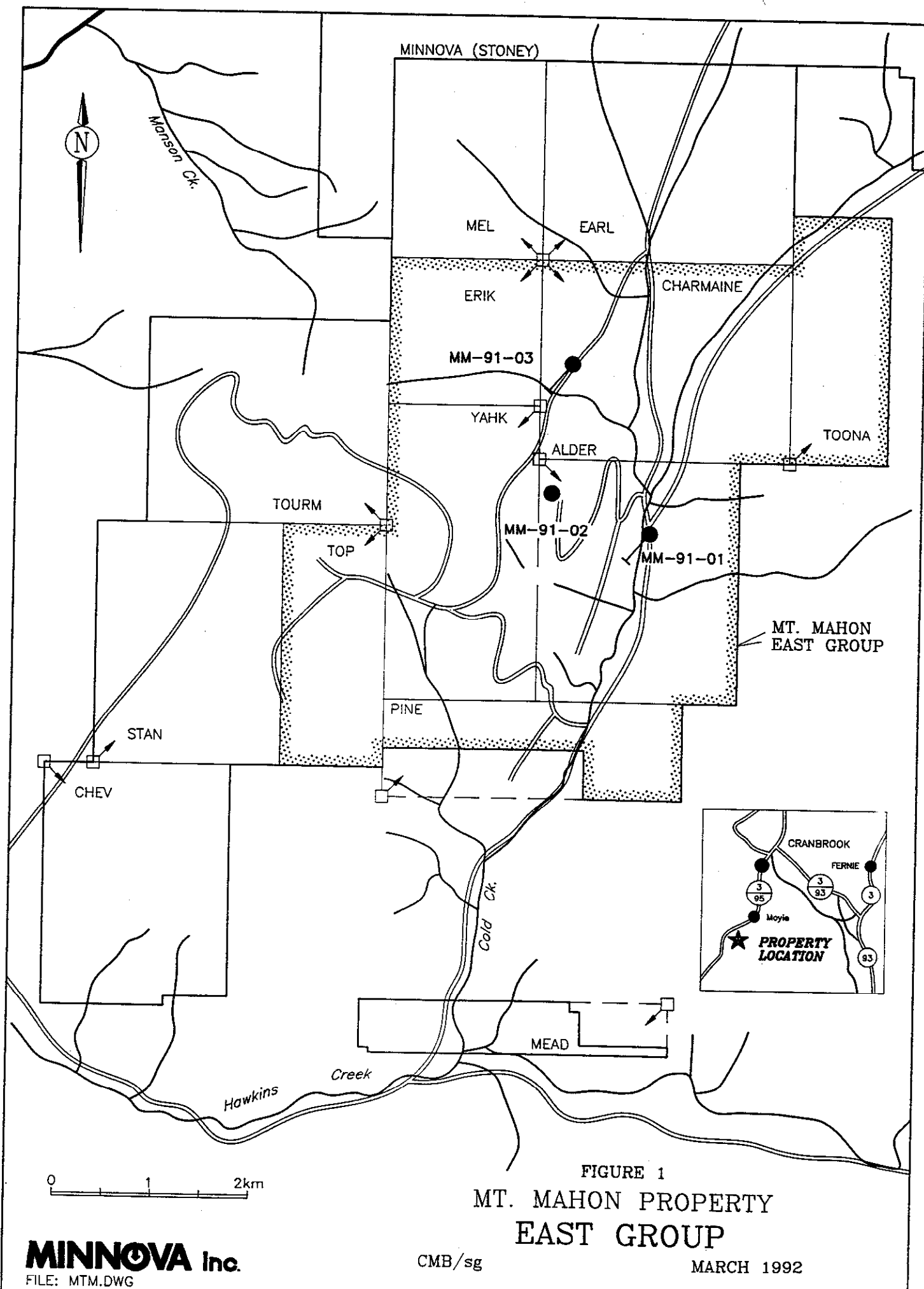
The Mt. Mahon property is located on the south and east facing slopes of Mt. Mahon in the Purcell Mountains of southeastern B.C. The claims can be reached by proceeding east from the north end of Yahk, B.C. on the Hawkins Creek (Yahk Meadows) forestry road. At about the 12 km point the Cold Creek access road branches north and provides access along the eastern portion of the Mt. Mahon property. A number of other 4WD old logging roads exist on the property in various states of decay.

Physiography

The property is situated in the Purcell Mountains and elevations range from 1150 metres in the Cold Creek valley to over 1900 metres at the Mt. Mahon summit. Relief is quite gentle over much of the claim block.

The forest cover consists of immature stands of fir and spruce as well as stands of alder. A large recent clearcut exists in the central and eastern portions of the property.

The climate is cool and dry without snow in the upper reaches between June and October.



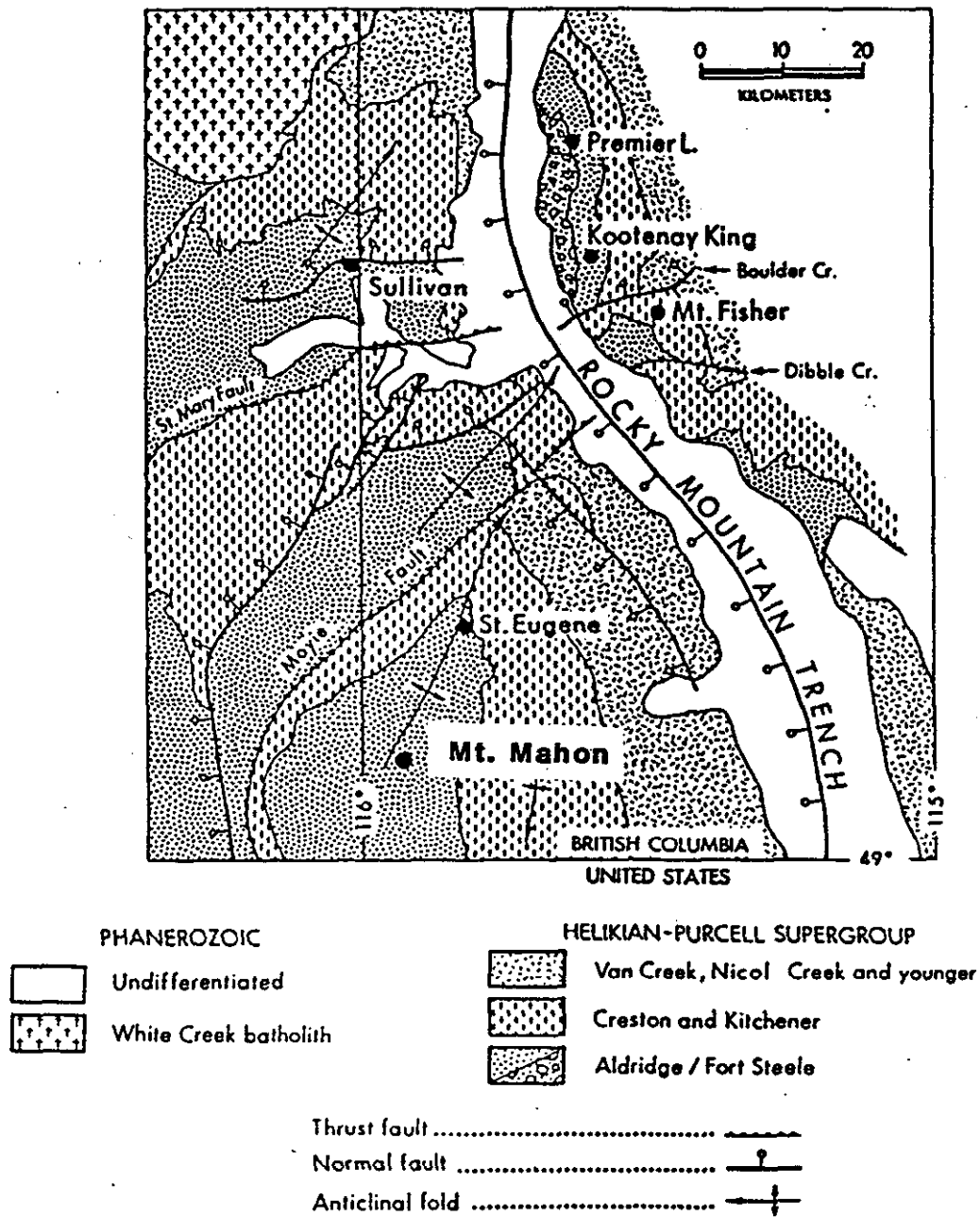
Property and Ownership

The Mt. Mahon property consists of 13 claims for a total of 197 units. Minnova Inc. has an option to earn an interest in the claims from owners, Chevron Minerals Ltd. and St. Eugene Mining Corporation Limited.

The following table lists the current status of the claims:

Table 1. Claim Status

<u>Claim Name</u>	<u>Record No.</u>	<u>Units</u>	<u>Area</u>	<u>Expiry Date</u>
<u>Mt. Mahon South Group</u>				
Chev	1941	20	500 ha	Sep 23/1993
Stan	1942	20	500 ha	Sep 23/1993
Top	952	10	250 ha	Jun 26/1992
Yahk	721	18	450 ha	Aug 1/1993
Alder	753	20	500 ha	Sep 7/1993
Pine	754	12	300 ha	Sep 7/1992
<u>Mt. Mahon North Group</u>				
Tourm	549	20	500 ha	Sept 21/1993
Mead	782	6	150 ha	Oct 9/1993
Toona	2127	10	250 ha	Mar 5/1993
Charmaine	2128	20	500 ha	Mar 5/1993
Erik	2129	9	225 ha	Mar 5/1993
Earl	2130	20	500 ha	Mar 5/1993
Mel	2131	12	300 ha	Mar 5/1993



from Hoy 1989

Washington State Information Circular 86

Fig. 2 MT. MAHON LOCATION MAP

History

The Mt. Mahon property has undergone exploration most recently by Chevron Minerals Ltd. (1984-1985) and Falconbridge Ltd. (1980-1981). Eleven drill holes have been drilled on the property and a number of soil and geophysical surveys have been conducted. The reader is referred to Assessment Report #14,240 for a comprehensive report on surface exploration at Mt. Mahon.

1991 WORK PROGRAM

A total of three holes were drilled to probe the Lower-Middle Aldridge formation contact zone on 1 kilometre centres. The holes were collared in the hangingwall of tourmalinite showings exposed on the south flank of Mt. Mahon. This report is concerned with the lower portion of hole MM-91-01 and holes MM-91-02 and MM-91-03. The program consisted of 956 metres of NQ diamond drilling, 37 whole rock analyses and 46 geochem assays.

GEOLOGY

Regional Geology

The Proterozoic-age Aldridge Formation covers a large part of southeast B.C. and the southwest corner of Alberta. The Aldridge consists of upper greenschist facies sediments and conformable gabbroic sills known as the Moyie intrusions. The package forms three main structural blocks in southern B.C. divided by the northeast trending Cranbrook and Moyie Faults. Each structural block forms a broad open northeast plunging anticlines and it is the anticlinal axis of the northernmost structural block that the Sullivan deposit is situated. The Sullivan deposit is a 160 million ton >10% Pb-Zn, 68 g/t Ag massive sulphide sheet

underlain by tourmalinization and overlain by an albite-chlorite alteration halo.

The Mt. Mahon claims are within the Moyie structural block, the southernmost block. The Sullivan time horizon (Lower - Middle Aldridge contact) is believed to be present on Mt. Mahon and extends, with shallow dips, north across the property.

The only significant producer apart from the Sullivan in the Aldridge Formation is the former St. Eugene Mine. The St. Eugene produced 1 million tons of 14% Pb, 5% Zn and 240 g/t Ag from a steep dipping massive sulphide vein. The St. Eugene is about 15 km northeast of the Mt. Mahon property.

Property Geology

The Mt. Mahon claims are underlain by Middle Aldridge formation sediments and Moyie sills and dikes. The bedded rocks form an open NNE shallow plunging anticline. Dips range from 15° to 25° northeast.

The clastic assemblage is made up of predominantly medium bedded quartz-rich greywackes intercalated with thin bedded siltstones and mudstones. The finer material occasionally displays graded bedding, ripple marks and cross bedding. The package probably represents a turbidite sequence of considerable thickness. The intrusive rocks range from diorite to gabbro and are medium to coarse grained.

Exposures on the south flank of the Mt. Mahon summit consist of tourmaline rich argillites. The tourmalinite occurs as a massive, very hard black rock consisting mainly of very fine felted tourmaline needles. Tourmalinite float has been discovered on the Erik claim 2 km north of the Mt. Mahon summit. A thin 1 metre bed of intraformational conglomerate occurs on Mt. Mahon and has been traced several hundred metres north and east of the summit.

The target stratigraphy dips below a large gabbro sill which underlies much of the Alder claim.

Please refer to Assessment Report #14,240 for a detailed description of geology, geochemistry and geophysical surveys conducted on the property.

DIAMOND DRILLING

MM-91-01 was collared on the Cold Creek forestry access road a few hundred metres south of the Ryan Creek road junction. The hole was designed to test Lower-Middle Aldridge contact stratigraphy 1 km east and 1.6 km downdip from a massive sulphide intersection in YA-6.

MM-91-02 was located approximately 1 km west of MM-91-01 and was again planned to intersect the YA-6 horizon approximately 1 km downdip beneath a gabbro sill.

MM-91-03 was located 1 km north of MM-91-02 and was designed to test the YA-6 horizon at the position of a broad gravity high.

RESULTS

All three holes intersected similar stratigraphy beginning with a gabbro sill which appears to have a true thickness of about 200 metres followed by a thin bedded to laminated sequence of siltstone, argillite and chert about 50 metres thick and the remainder turbidite accumulations. The turbidites consist of thin to medium bedded quartzites intercalated with siltstone, argillite and argillaceous wackes. Flame structures, cross bedding, load casts and other sedimentary structures are well preserved and quite common all indicating tops are uphole. The bedding indicates that the sediment package forms a shallow east dipping pannel at approximately 15°.

Trace amounts of disseminated and finely laminated pyrrhotite occur throughout the sediment package. MM-91-02 intersected a narrow quartz veinlet carrying sphalerite at 320

metres and from 400 - 450 metres weakly anomalous zinc and lead values were detected (213-236 ppm Zn, 176-308 ppm Pb). This zone of elevated base metal mineralization is accompanied by strong biotite alteration and bands of garnet.

No base metal enrichment occurs in MM-91-03, however, elevated boron values at 122 m and 212 m suggest the presence of tourmaline over 2 km away from the main tourmalinite showings on Mt. Mahon. Tourmaline is an important indicator mineral at the Sullivan mine.

Lithogeochemistry

Thirty-seven lithogeochemical and 46 geochemical samples were taken from the core. All were analyzed at Min-En Labs, North Vancouver. Litho samples were analyzed for SiO_2 , TiO_2 , CaO , MgO , Na_2O , K_2O , MnO_2 , Fe_2O_3 , (total iron), Al_2O_3 , Sr, Zn, and Ba by ICP analysis of a crushed and digested bead formed by fusion with lithium borate. Ag, Cu, Pb, Zn, B, Sb and As were analyzed by standard ICP techniques using an aqua-regia digestion. F and B-Tot were analyzed by fusion methods with their respective specific ion electrode and ICP finish. Geochem samples were analyzed for Cu, Pb, Zn, Ag, Au by standard ICP techniques.

Lithogeochemical samples were taken routinely approximately every 30 m down the hole. Lithogeochemistry does not show any marked deviation from fresh Middle Aldridge sediment. The gabbro sills are typically high in calcium, iron and magnesium and are enriched in copper. The sediments are calcium poor and are high in potassium and silica. The samples taken in the immediate footwall of the gabbro sill show moderate soda enrichment ($\text{Na}_2\text{O} > 4.00\%$) possibly as a result of sill intrusion.

CONCLUSIONS AND RECOMMENDATIONS

Three holes ranging from 380 to 450 metres were completed on the Mt. Mahon property. The holes tested specific geological and geophysical targets generated by previous operators. The holes cored Middle Aldridge turbidites and intrusive rocks. No transition or Lower Aldridge stratigraphy was recognized in any of the holes. Minor tourmaline occurrences were recognized in two places in MM-91-03 (122 m and 212 m) and a narrow zone of conglomerate was intersected by 256 metres. No base metal accumulations of any consequence were recognized in the drilling, however, elevated Pb-Zn values occur near the bottom of MM-91-02.

No further work is recommended in the eastern part of the claim block.

Appendix I
Itemized Cost Statement

Mt. Mahon Property
Itemized Cost Statement

Drilling

Leclerc Drilling Ltd., Beaverdell 956 m @ \$57.73/m	\$55,189.06
C. Burge 15 days @ \$350/day	5,250.00
S. McCallum 15 days @ \$150/day	2,250.00
	<u>64,939.06</u>

Geochemistry

Whole rock analyses 37 @ \$33.50	1239.50
Geochems 51 @ 17.25	879.75
	<u>2119.25</u>

Transportation

4 WD Truck 15 days @ \$50	750.00
Fuel	250.00
	<u>1000.00</u>

Room and Board

Hotel and Meals, Fiddlers, Yahk 15 days @ \$100	1500.00
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Report Preparation

C. Burge 4 days @ \$350/day	1400.00
Typing, Drafting, Computer	350.00
	<u>1750.00</u>

Total	<u><u>71,308.31</u></u>
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Appendix II
Statement of Qualifications

Statement of Qualifications

I, Colin Michael Burge hereby certify that:

1. I have worked as an exploration geologist since graduation from the University of Waterloo, Waterloo, Ontario with a BSc. in Earth Sciences (1981).
2. I am currently employed as a Project Geologist for Minnova Inc., 3rd Floor - 311 Water St., Vancouver, B.C. and have been with this company for five years.
3. I personally carried out or supervised the work reported herein.


Colin M. Burge

March 5, 1992
Date

Appendix III

Drill Logs

MM-91-01

MM-91-02

MM-91-03

MINNOVA INC.
DRILL HOLE RECORD

METRIC UNITS: X

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PLOTING COORDS  GRID: IDEAL
                  NORTH:  2025.00N
                  EAST:   930.00E
                  ELEV:   1245.00

```

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ALTERNATE COORDS  GRID: CHEVRON
                   NORTH: 12+70N
                   EAST:  17+80E
                   ELEV:  1245.00
```

COLLAR DIP: -80° 0' 0"
LENGTH OF THE HOLE: 425.81m
START DEPTH: 0.00m
FINAL DEPTH: 425.81m

COLLAR GRID AZIMUTH: 170° 0' 0"

COLLAR ASTRONOMIC AZIMUTH: 230° 0' 0"

DATE STARTED: September 20, 1991
DATE COMPLETED: September 25, 1991
DATE LOGGED: September 25, 1991

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

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

CONTRACTOR: LECLERC DRILLING LTD.
CASING: 18.3M
CORE STORAGE: FIDDLERS, YAHK

PURPOSE: TO TEST YA-6 MS HORIZON 1KM DOWNDIP AT DIGHEM MAG ANOMALY.

DIRECTIONAL DATA:

[illegible]

HOLE NUMBER: MM-91-01

MINNOVA INC.
DRILL HOLE RECORD

DATE: 13-February-1992

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 3.30	Casing					
8.30 TO 26.50	Quartz Wacke «WACKE/SLTS I»	Grey to white with occasional black bands. Very fine to fine grained. Massive 10-60cm quartzite beds intercalated with fine grain laminated siltstone/argillite/cherty bands, contact sharp and distinct. Finer siltier beds often cherty and argillaceous laminae biotite rich. 20-20.4m: Finely laminated siltstone/argillite intervals rusty stain. 22.9-23.1m: Cherty laminae. 25.5-25.8m: Bedding biotite rich lenses + vague siliceous clasts.	75 40	Nil.	Trace po.	Described by chevron as sandstone. Typical turbidite sequence of middle aldrige. 36126 20.5-23.5m. Possible marker? 36301 19.4-20.4m. 36302 22.9-23.1m. Disturbed due to sill intrusion.
26.50 TO 254.34	Gabbro «GAB»	Black and speckled very dark green and grey. Medium to coarse grained. Faulted contact 5cm gouge. Massive equigranular. Homogeneous. Hornblende, quartz feldspar crystals. Finer grained towards contact. ‡61-61.3‡ «Flt» 25cm gouge zone. 72.75m: Quartz vein, translucent 1-2cm, -barren. 77m: Fine grain size and becomes a more mafic phase. Below 100m becomes a fine to medium grained diorite. Below 186-195m minor quartz veinlets <1cm in width. ‡195-195.8‡ «Flt» 25cm gouge. 216.5-218.05m: 3-5cm quartz biotite vein at 10 degrees to core axis.		Nil.	Nil. Trace magnetite, pyrrhotite, and trace of chalcopyrite. ‡49-54‡ «Tr Po, Cp» ‡64-77‡ «2% Sp» ‡123.95‡ «Tr Cp» 1cm quartz veinlet carrying 5% chalcopyrite. Vein at 15 degrees to core axis. 126.8-127.4m: 1-2% po. ‡134.3‡ «Tr Cp» 182.65m: Quartz veinlet 1cm, 2% cp. ‡188.35‡ «Tr Cp» 192m: Trace galena in minor 1-2cm albite veinlet.	Weakly magnetic. Geochem 36303 46.25-46.57m. 36127: 50.9-53.9m. 36128: 74-77m. 36129: 108.8-111.8m: More mafic phase. 36130: 136.2-139.2m. 36131: 169.8-172.8m. Lost core 30cm at fault. 36132: 206.3-209.3m.

HOLE NUMBER: MM-91-01

DRILL HOLE RECORD

LOGGED BY: Colin Burge

PAGE: 2

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		Lower contact sharp at.....	82			36133: 239.9-242.9m. Absolutely no indication of approaching contact until the last 1.5m where grain size becomes very fine.
254.34 TO 286.90	Quartzite, Quartz Wacke and Laminated Siltstone «WACKE/SLTS 1»	White and light to dark grey bands. Very fine to fine grained. Up to 1.5m wack beds fining upward interbedded with rhythmically bedded siltstone. Very well sorted, sharp contacts. Well preserved sedimentary structures indicating tops up hole - flames, lode casts, remnant cut and fill. Occasional cherty laminae. ‡264.3-265‡ «Cht» 264.3-265m: Siliceous zone, possible chert horizon. Zones of coalescing/lapilli 1-2mm size (accretionary lapilli?). Rare argillaceous wacke beds toward base.	75	Nil. Traces of sericite forming laminations.	Nil. ‡264.3-264.9‡ «In Gne» Traces of galena as disseminated flakes.	No disturbance of sediments due to dyke /sill intrusion. 36134: 255.1-258.1m. Units are now siliceous with biotite rich horizons due to metamorphic grade. 36304 geochem: 264.3-264.9m. 36308 geochem: 285.6-286.8m.
286.90 TO 411.40	Argilla- ceous Wacke Quartz Wacke «ARG WACKE»	Light grey to grey-black. Very fine to medium grained. Contact gradational over 5-10m. ‡277.27‡ «Flt» 3cm sericite gouge. 290-290.4m: Contacts normal to bedding and parallel to core axis. Argillaceous component seems to increase downhole. 298-298.7m: Interbeds of clean chert 1-2cm thick. 314.15m: Laminations..... Below 304m: thin beds and laminae becoming less distinct - less sharp and more gradational. ‡317.3-326.5‡ «Qtz Vnlts» Minor quartz veinlets, barren, 3-4mm wide. Occasionally pygmatically folded. Some carry biotite crystals. No s. 330.4-331.32m: Argillaceous mudstone. 2% po. Argillaceous component of both medium to thin bedded quartz wackes and siltstone laminae consi-	82	Weak to moderate sericite throughout. Weak to moderate sericite alteration. Some banded siltstone/mudstone and argillaceous mudstone moderate to strongly sericite altered. 332-337m: Strong sericite. ‡368.35-369‡ «Cord»	Trace 3% pyrrhotite throughout. ‡287-288.5‡ «2% Po» Pyrrhotite as veinlet and as ellipsoid flat lenses 3-4mm. Possible fragments mantled by biotite. 316-425.81m: Trace pyrrhotite. ‡317.67-318.17‡ «2% Po» Pyrrhotite common on fracture surfaces. 354m: Very fine grained 1cm pyrrhotite beds. 367.5-367.7m: Wispy po bands <1cm in thickness. Possible beds.	36135: 285.6-288.6m. Evidence of syn-sedimentary tectonic activity. 36136: 316.1-319.1m. 36305: 317.67-318.17m. 320.25m: Concretions occasional 1-2cm size foreign clast usually of fine grain, sub rounded material below 325m. 331.32m: Pink aggregates 2-3mm in size - remnant garnets? 36137: 332.5-335.5m. 36138: 355.7-358.7m. Below 360m: Pink aggregates common over 10cm zones. Often occur near po concentrations. Alteration phenomena?

HOLE NUMBER: MM-91-01

MINNOVA INC.
DRILL HOLE RECORD

DATE: 13-February-1992

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		derably increases +360m. 370.9-383.9m: Argillaceous mudstones with minor "dirty" wacke intervals. 407-407.35m: Rhythmically banded zone. Lower contact gradational over 5-10m.		Pink 2-5mm aggregates and 1-1.5cm jelly bean shapes filled with a green mineral remnant cordierites? Moderate to strong sericite. Numerous bands 10-20cm wide of 1-3mm pink spots and occasional vague jelly bean shapes 1cm. E.g. 409.5m, 418.6m, and 425.5m.	1-3% po disseminated & minor veinlet. 374.7-374.8m: 5-7% po as wispy bands possible beds. 395.3-395.55 «Po Hor, Tr Cp» 5- 1-2mm chert and pyrrhotite horizons. One carries a trace of cp. Cht rexyld to quartz. 399.3 «Tr Gn» Trace galena in minor 1-2mm quartz veinlet. 401.5 «Po Hor, Tr Cp» 4mm cht horizon carry pyrrhotite and traces of chalcopryrite.	36139: 380.1-383.1m. 36307 geochem: 395.3-395.7m. 36140: 402-405m. Jelly bean porphyroblasts - possibly cordierite retrograding to biotite? Require thin section.
411.40 TO 425.80	Quartz Wackes «WACKE»	Light grey to grey. Fine grained. 418.45m: Fault, 1cm gouge. Alternating thin to medium bedded quartz rich wackes. Very well sorted. Often fining upward sequences. END OF HOLE.	78	Very weak sericite. Sericite common on cleavage planes. Pink spots continue to occur concentrating in 10cm zones.	Trace po.	36141: 422.8-425.8m. No laminated siltstone sequences. Argillaceous component substantially diminished.

HOLE NUMBER: MM-91-01

DRILL HOLE RECORD

LOGGED BY: Colin Burge

PAGE: 4

HOLE NUMBER: MM-91-01

ASSAY SHEET

DATE: 13-February-1992

DATE: 15 February 1992

Sample	From (m)	To (m)	Length (m)	ASSAYS					GEOCHEMICAL											COMMENTS		
				Cu %	Pb %	Zn %	Ag g/t	Au g/t	Ag ppm	As ppm	Ba ppm	Cd ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au ppb	B ppm			BaT ppm	F ppm
36 01	19.90	20.40	0.50						0.8			0.1	53	7		49	5	78.3	1920	395		
36 02	22.90	23.10	0.20						0.6			0.1	8	12		32	5	52.8	2650	205		
36 03	46.25	46.57	0.32						1.3	2			385	11	1	63	3					
36 04	264.30	264.90	0.60						0.4			0.1	4	3		4	10	48.9	215	160		Gabbro
36 08	285.60	286.80	1.20						0.6			0.1	40	13		29	5	131.9	1030	505		
36306	314.20	314.70	0.50						0.9			0.1	69	17		32	5	127.7	750	485		
36305	317.67	318.17	0.50						0.8			0.2	105	21		80	5	183.5	1100	450		
36307	395.30	395.70	0.40						0.9			0.1	102	38		35	5	172.9	800	610		

HOLE NUMBER: MM-91-01

ASSAY SHEET

PAGE: 5

HOLE NUMBER: MM-91-01

GEOCHEM. SHEET

DATE: 13-February-1992

Sample	From (m)	To (m)	Length (m)	Al2O3 %	Ba %	CaO %	Fe2O3 %	K2O %	MgO %	MnO2 %	Na2O %	P2O5 %	SiO2 %	TiO2 %	S %	TOT %	Ag ppm	As ppm	Ba ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au ppb	LOI %	B ppm	F ppm
36126	20.50	23.50	3.00	13.05	0.065	3.91	4.96	2.85	1.57	0.11	3.03	0.01	67.91	0.57	0.06	98.08	1.1	11	264	17	14	2	39	5	.9	51.5	315
36127	50.90	53.90	3.00	11.46	0.005	7.8	16.86	0.46	2.92	0.25	1.73	0.11	54.81	2.08	0.17	98.65	1.2	2	28	163	9	1	69	5	.4		
36128	74.00	77.00	3.00	11.81	0.005	6.69	19.4	1.32	3.09	0.27	1.1	0.08	52.27	2.67	0.18	98.88	0.7	1	166	77	7	1	74	5	.2		
36129	108.80	111.80	3.00	12.32	0.005	9.18	19.36	0.42	4.79	0.22	1.43	0.03	48.45	2.11	0.22	98.53	1.4	1	13	552	6	1	46	5	.9		
36130	136.20	139.20	3.00	14.53	0.005	8.87	12.63	0.38	5.06	0.19	2.57	0.02	52.89	1.16	0.13	98.43	1	1	23	213	8	1	28	10	.7		
36131	169.80	172.80	3.00	14.66	0.005	9.39	11.88	0.4	5.55	0.18	2.46	0.01	52.44	1.06	0.13	98.17	1.3	1	25	164	6	1	20	5	1.0		
36132	206.30	209.30	3.00	15.2	0.005	9.37	11.05	0.49	6.29	0.18	2.35	0.01	52.15	0.95	0.18	98.21	0.8	23	21	132	11	2	18	5	1.2		
36133	239.90	242.90	3.00	14.17	0.005	9.21	11.67	0.41	6.63	0.18	2.35	0.01	52.12	0.98	0.12	97.85	0.8	5	18	156	9	1	20	5	1.3		
36134	255.10	258.10	3.00	14.16	0.205	1.15	2.54	3.66	1.14	0.03	4.95	0.01	69.91	0.57	0.02	98.35	0.8	9	158	6	8	1	22	5	.6	64.9	295
36135	285.60	288.60	3.00	15.16	0.05	1.05	3.34	3.72	1.15	0.04	3.02	0.01	68.95	0.58	0.28	97.34	0.8	11	167	39	9	1	27	5	2.3	149.0	565
36136	316.10	319.10	3.00	15.54	0.03	1.23	5.51	4.26	1.35	0.07	1.53	0.01	66.72	0.57	0.31	97.13	0.8	9	256	84	16	1	42	5	2.2	61.6	590
36137	332.50	335.50	3.00	18.52	0.06	0.22	4.69	5.32	1.03	0.05	1.17	0.01	64.54	0.66	0.07	96.34	0.6	5	140	22	9	1	36	5	2.8	155.6	490
36138	355.70	358.70	3.00	19.64	0.065	0.39	5.58	5.53	1.32	0.08	1.29	0.01	62.23	0.73	0.11	96.96	0.7	1	184	15	10	1	60	5	2.4	148.6	600
36139	380.10	383.10	3.00	14.83	0.005	1.13	4.47	3.53	1.22	0.06	1.89	0.01	69.19	0.55	0.32	97.2	0.7	7	126	36	17	2	73	5	2.2	81.0	570
36140	402.00	405.00	3.00	15.59	0.01	1.16	4.27	3.93	1.04	0.07	1.9	0.01	68.58	0.57	0.08	97.19	0.7	7	171	25	13	1	50	5	1.9	77.6	485
36141	422.80	425.80	3.00	20.1	0.045	0.86	4.13	5.17	0.96	0.06	1.59	0.01	63.63	0.76	0.03	97.35	0.9	5	136	4	10	2	44	5	1.8	104.2	515

HOLE NUMBER: MM-91-01

GEOCHEM. SHEET

PAGE: 6

MINNOVA INC.
DRILL HOLE RECORD

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PLOTING COORDS  GRID: IDEAL
                  NORTH: 1220.00N
                  EAST:  10.00W
                  ELEV:  1436.00

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ALTERNATE COORDS GRID: CHEVRON
 NORTH: 10+20N
 EAST: 6+50E
 ELEV: 1436.00

IMPERIAL UNITS: METRIC UNITS: X

COLLAR DIP: -80° 0' 0"
LENGTH OF THE HOLE: 450.20m
START DEPTH: 0.00m
FINAL DEPTH: 450.20m

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

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

CONTRACTOR: LECLERC DRILLING LTD
CASING: 3.1
CORE STORAGE: FIDDLERS

PURPOSE: TO TEST YA-6 MASSIVE SULPHIDES 1KM DOWNDIP AT THE SOUTHERN END OF GRAVITY ANOMALY.

DIRECTIONAL DATA:

[illegible]

HOLE NUMBER: MM-91-02

MINNOVA INC.
DRILL HOLE RECORD

DATE: 13-February-1992

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 3.10	«CASING»					
3.10 TO 95.60	Gabbro «GAB»	Speckled white and green to grey. Medium to fine grained. Massive, equigranular. Hornblende, feldspar rich rock. Subhedral to euhedral crystals. Concentrations of feldspars give a "layered" look. Coarser grain size noted from 3.1-24.7m. 15.2-15.3m: Flt gouge. 15.2-17.4m: Broken ground minor gouge. 24.7m: 3-4cm clay zone fault - high angle. 58m: Flt minor gouge. 70.2-71.7 «Flt» Fault clay gouge. 71m: Fault gouge 3-5cm common between 10-20cm blocks of core. Lower contact indistinct over 10cm.	10	Nil.	Nil. 31m: Stibnite(?) euhedral, acicular crystals of lead. Grey mineral in 1cm quartz vein at 20 degrees to core axis.	Weakly magnetic traces of magnetite. 36142: 23.5-26.5m. 70.7m: Core loss 20cm. 36143: 80.8-83.8m.
95.60 TO 142.30	Quartz Wackes and Laminated Siltstone and Argil- lite «WACKE/SLTS T»	Grey to white with pinstripes, black and grey. Fine to u. fine grained. Thin to medium bedded quartz wacke units interbedded with laminations of siltstone, wacke and argillite. Very well sorted. Well bedded at Biotite disseminated in quartz rich zones and concentrations in more argillaceous zones. 2-3mm rounded clasts similar to accretionary lapilli form occasional beds. 99.7m: Fault, 3-5cm gouge. 112.95m: Base metal collects in cut and fill feature. 115m: Fault 3cm gouge 20cm core loss. 119-119.5 «Flt» 15cm gouge. 133.35-133.75 «Flt»	80	Siliceous biotite bearing zones .5-1m. Rare flecks of muscovite/sericite reflect light. Occasional bands resemble granite, massive quartz + biotite rocks.	«Tr gn» Traces of galena disseminated often smeared on foliation planes. 119.95m: Trace gn + needle-like crystals tourmalinite? 5 rich clasts.	Bedding disturbed near contact with dyke/sill. Sericate, retrograding biotite? 36144: 102.3-105.3m. Geochems: 36309: 106.9-107.9m. 36310: 111.1-111.6m. 36311: 113.0-114.0m. 36312: 124.1-124.6m. 36313: 107.9-108.9m. 36314: 108.9-109.9m. 36315: 109.9-111.1m. 36316: 119.55-119.85m. 36145: 124.6-127.6m.

HOLE NUMBER: MM-91-02

DRILL HOLE RECORD

LOGGED BY: Colin Burge

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HOLE NUMBER: MM-91-02

MINNOVA INC.
DRILL HOLE RECORD

DATE: 13-February-1992

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		Muddy gouge. 134.8m: Cherty zone. Contact gradational over tens of metres.				36317: 126.4-126.7m. 36318: 129.0-129.5m. 36319: 134.8-135.3m.
142.30 TO 450.20	Quartz Wackes in- terbedded With Argil- laceous Mudstones and Wackes «WACKE/ARG MDST»	Thin to medium bedded quartz wackes in fining up- ward sequences. Occasional thinner beds and laminated zones 10cm wide. Contacts between in- dividual beds vagues. Well sorted. Well preser- ved flames common. 141-145m: Zone of minor quartz veinlets - usually normal to core axis and less than 1cm wide. Occasionally cany po. Occasional disrupted beds. BEDDING @ 154.5m Rare argillite clasts. Truncated beds frequent. 216.4-217.2m: Laminated siltstone sequence. Pin- stripe sltst/argillite. Correlates with 407-	85	Weak sericite developed mostly in mud- stones. Occasional bands up to 10cm containing pink spots to 3mm.	«Tr Po» Locally 3-5% po in muds. 142.2m: 2-3cm zone of sulphide clasts- flattened, elliptical 3-4mm. Rhyotite common on foliation planes. 179m: Trace chalcopryrite in flattened biotite clasts. 208m: Sulphide clast 5x3cm at 40% s: 40% po, 20% biotite? 209.7m: Ultra-fine grain pyritic clasts trace galena in cherty band. ‡217-217.15‡ «Cht + Sph» Trace sphalerite + s- clasts 2cm chert	Do no get the sharp banded siltstone sequences. 36146: 145.4-148.4m. 36147: 179.0-182.0m. 36148: 206.3-209.3m. *36120: 209.4-209.9m. *36121: 217.0-217.15m. *36122: 224.25-224.55m. 36149: 233.8-236.8m. 36150: 248.25-249.0m. Alt'n litho. 36323: 260.9-261.0m. 36324: 265.65-265.75m.

HOLE NUMBER: MM-91-02

DRILL HOLE RECORD

LOGGED BY: Colin Burge

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HOLE NUMBER: MM-91-02

MINNOVA INC.
DRILL HOLE RECORD

DATE: 13-February-1992

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		tact possible dykes? 424.8m: fault 2-3cm gouge. 449-450m: Laminated sequence, ultra fine grain wacke/arg laminations. END OF HOLE.		409-411.5} «Biot» 415.3-417.9} «Biot» 422-423.95} «Biot» 448.17-448.37m: Biotite and carbonate bands + pink spots altered beds.	2-3% pyrrhotite/pyrite as very fine grain veinlet. Filling hairling frac- ture in core - common on foliation plane.	into hole during bit change. 36156: 404.5-407.5m. 36157: 424.0-427.0m. 36158: 447.2-450.2m. 36338: 448.17-448.37m.

HOLE NUMBER: MM-91-02

DRILL HOLE RECORD

LOGGED BY: Colin Burge

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HOLE NUMBER: MM-91-02

ASSAY SHEET

DATE: 13-February-1992

Sample	From (m)	To (m)	Length (m)	ASSAYS					GEOCHEMICAL												COMMENTS	
				Cu %	Pb %	Zn %	Ag g/t	Au g/t	Ag ppm	As ppm	Ba ppm	Cd ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au ppb	B ppm	BaT ppm			F ppm
36309	106.90	107.90	1.00						1.1	1	164	0.1	34	16	1	28	2	79.5	1120	260		
36313	107.90	108.90	1.00						1.2	1	106	0.1	6	12	1	16	2	41.1	685	150		
36314	108.90	109.90	1.00						1.2	1	55	0.1	6	14	1	16	1	28.9	207	130		
36315	109.90	111.10	1.20						1.1	1	49	0.1	7	16	1	15	2	26	180	80		
36310	111.10	111.60	0.50						1.2	1	81	0.1	10	16	1	18	1	35.8	283	170		
36328	111.60	112.60	1.00						1.3	1	156	0.1	43	28	1	32	2	103.6	730	330		
36329	112.60	113.00	0.40						1.7	1	154	0.1	30	30	1	31	1	93.5	995	365		
36311	113.00	114.00	1.00						0.9	1	340	0.1	67	15	1	27	3	101.2	1080	365		
36330	114.00	115.00	1.00						1.6	1	140	0.1	15	25	1	26	2	55.5	954	425		
36331	115.00	116.50	1.50						2	1	77	0.1	9	24	1	14	1	122.1	874	175		
36332	116.50	118.00	1.50						1.8	1	76	0.1	7	23	1	16	3	73.9	1040	165		
36333	118.00	119.00	1.00						1.7	1	133	0.1	13	26	1	25	2	125.9	1010	365		
36316	119.55	119.85	0.30						0.9	1	161	0.1	137	13	1	47	4	79.4	885	405		
36312	124.10	124.60	0.50						0.8	1	207	0.1	18	15	1	30	2	99.9	823	385		
36317	126.40	126.70	0.30						1.1	1	204	0.1	45	17	1	31	2	116	965	355		
36318	129.00	129.50	0.50						1.3	1	103	0.1	8	16	1	16	2	166.6	902	145		
36319	134.80	135.30	0.50						1.2	1	99	0.1	9	21	1	15	2	143.3	1320	100		
36334	135.30	136.30	1.00						1.7	1	83	0.1	9	27	1	17	2	150.3	909	95		
36335	136.30	137.30	1.00						1.8	1	106	0.1	16	24	1	22	1	44.2	781	200		
36320	209.40	209.90	0.50						1.5	1	229	0.1	39	151	1	226	1	89.2	574	545		
36321	217.00	217.15	0.15						1.2	1	259	0.1	37	43	1	142	1	81.1	375	315		
36322	224.25	224.55	0.30						1.3	1	132	0.1	34	90	1	67	3	115.8	608	580		
36323	260.90	261.00	0.10						1.2	63	53	0.1	30	32	1	42	1	57.5	136	205		
36324	265.65	265.75	0.10						1	943	87	0.1	58	52	1	60	10	51	132	415		
36336	282.82	282.92	0.10						0.9	12	61	0.1	71	29	1	65	6	11.5	217	300		
36325	324.94	325.94	1.00						1	3	50	44.7	45	66	1	2375	2	83.9	129	140		Qtz veinlet < 2 cm. width
36326	346.50	346.60	0.10						1.3	1	83	0.1	40	36	1	243	1	52.2	671	315		
36327	349.40	349.50	0.10						1.1	5	43	0.1	44	28	1	52	2	72	132	100		
36337	409.30	409.80	0.50						1.1	12	199	0.1	7	176	1	213	4	6.4	223	460		
36338	448.17	448.37	0.20						1.3	33	131	0.1	8	309	1	236	3	48.2	156	1500		Alteration Band

HOLE NUMBER: MM-91-02

ASSAY SHEET

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HOLE NUMBER: MM-91-02

GEOCHEM. SHEET

DATE: 13-February-1992

Sample	From (m)	To (m)	Length (m)	Al2O3 %	Ba %	CaO %	Fe2O3 %	K2O %	MgO %	MnO2 %	Na2O %	P2O5 %	SiO2 %	TiO2 %	S %	TOT %	Ag ppm	As ppm	Ba ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au ppb	LOI %	B ppm	F ppm
36142	23.50	26.50	3.00	14.95	0.005	8.75	11.93	0.4	5.22	0.18	2.5	0.02	52.87	1.06	0.03	97.93	0.7	1	15	123	19	1	25	20	1.0		
36143	80.80	83.80	3.00	14	0.005	9.63	11.56	0.43	6.61	0.19	2.06	0.01	51.92	0.98	0.03	97.41	1	1	26	124	15	1	29	5	1.5		
36144	102.30	105.30	3.00	13.28	0.005	1.12	2.81	1.42	0.76	0.05	6.07	0.01	72.09	0.47	0.01	98.08	1.1	1	75	5	11	1	14	5	.9	41.0	195
36145	124.60	127.60	3.00	15.5	0.075	0.49	4.73	4.42	1.38	0.05	2.22	0.01	68.11	0.57	0.02	97.56	1	1	169	17	10	1	25	5	1.8	104.3	530
36146	145.40	148.40	3.00	14.11	0.07	0.63	4.26	4.01	1.09	0.05	2	0.01	70.63	0.58	0.06	97.51	1	1	139	37	13	1	23	5	1.5	75.1	430
36147	179.00	182.00	3.00	16.56	0.05	0.46	5.32	4.69	1.09	0.07	1.25	0.01	66.78	0.6	0.24	97.11	1.1	2	132	31	12	1	42	5	2.2	126.5	515
36148	206.30	209.30	3.00	17.76	0.055	0.57	5.27	4.82	1.44	0.07	1.97	0.01	64.76	0.65	0.08	97.46	1.1	1	137	26	15	1	86	5	2.0	75.8	645
36149	233.80	236.80	3.00	14.46	0.025	1.81	4.31	3.47	0.96	0.11	2	0.01	69.5	0.54	0.32	97.52	1.1	1	108	30	17	1	53	5	1.9	53.5	600
36150	248.25	249.00	0.75	10.71	0.01	5.72	3.2	1.93	0.63	0.21	2.27	0.01	71.58	0.51	0.24	97	1.3	11	73	25	20	1	33	5	2.5	80.0	335
36151	267.30	270.30	3.00	13.03	0.015	2.51	4.5	2.46	1.04	0.1	2.81	0.01	71.11	0.5	0.28	98.36	1	58	107	26	13	1	54	5	1.0	68.1	465
36152	297.80	300.80	3.00	12.73	0.01	4.2	4.1	2.11	0.79	0.18	2.68	0.01	69.1	0.46	0.51	96.87	1.1	1	86	32	17	1	52	5	2.9	107.2	475
36153	328.30	331.30	3.00	16.32	0.05	0.43	4.54	4.84	1.22	0.07	1.1	0.01	67.37	0.59	0.62	97.16	0.9	4	88	24	15	1	59	5	2.8	108.2	815
36154	352.60	355.60	3.00	17.15	0.05	1.04	4.77	4.88	1.19	0.09	1.5	0.01	65.77	0.64	0.32	97.4	1.1	1	110	21	17	1	75	5	2.2	109.6	840
36155	380.10	383.10	3.00	16.4	0.05	1.5	3.9	4.29	1.01	0.08	1.33	0.01	67.41	0.6	0.41	96.98	0.9	1	85	23	21	1	74	5	2.5	104.8	605
36156	404.50	407.50	3.00	16.03	0.05	1.37	5.38	4.17	1.19	0.08	1.45	0.01	65.09	0.59	0.62	96.02	1.1	1	134	33	21	1	100	5	3.6	66.1	680
36157	424.00	427.00	3.00	12.07	0.025	1.56	3.97	2.87	0.73	0.07	1.58	0.01	65.24	0.46	0.84	89.41	1.4	1	76	37	122	1	89	5	10.5	71.9	385
36158	447.20	450.20	3.00	13.94	0.045	1.36	4.25	4.04	1.3	0.08	1.08	0.01	70.01	0.5	0.33	96.93	1	22	125	30	79	1	136	5	2.4	159.5	700

HOLE NUMBER: MM-91-02

GEOCHEM. SHEET

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MINNOVA INC.
DRILL HOLE RECORD

METRIC UNITS: X

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PLOTING COORDS  GRID: IDEAL
                  NORTH: 1625.00N
                  EAST:  730.00W
                  ELEV:  1447.80

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ALTERNATE COORDS GRID: CHEVRON
NORTH: 17+80N
EAST: 1+60E
ELEV: 1447.80

COLLAR DIP: -80° 0' 0"
LENGTH OF THE HOLE: 380.10m
START DEPTH: 0.00m
FINAL DEPTH: 380.10m

COLLAR ASTRONOMIC AZIMUTH: 215° 0' 0"

COLLAR SURVEY: NO
MULTISHOT SURVEY: NO
ROD LOG: NO

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

CONTRACTOR: LECLERC DRILLING LTD
CASING: 3.1
CORE STORAGE: FIDDLERS

DIRECTIONAL DATA:

[illegible]

HOLE NUMBER: MM-91-03

MINNOVA INC.
DRILL HOLE RECORD

DATE: 13-February-1992

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
0.00 TO 3.10	«CASING»					
3.10 TO 102.70	Gabbro «GAB»	Green and white speckled. Medium to coarse grained and fine grained. Massive, equigranular subhedral - euhedral hornblende - feldspar rich unit. Medium to coarse grain. Minor quartz + biotite. 12.15m: Sharp contact with fine grain gabbro then coarsens gradually over 3-4m back to medium to coarse grain material. Minor 1-2cm barren quartz veining. 28.53m: Another sharp etc with underlying fine grain material coarsening downhole to almost a cumulate texture. 52-53.9m: Quartz veinlet 1-2cm along core axis, no s, vuggy. 97.35-97.4m: quartz veinlet, trace po, vuggy. 102-102.7m: Fine grain size.		Nil.	Nil.	Non-magnetic. 36159: 44.8-47.8m. 36160: 84.4-87.5m.
102.70 TO 146.50	Quartz Wackes and Laminated Siltstone and Argil- lite «WACKE/SLTS T/ARG»	White grey and black spotted and pinstripe. Very fine to fine grained. Contact Sharp at..... Thinly bedded to laminated siliceous quartz wackes. Composed mainly of silica and biotite. Laminated argillite and silicified siltstones display well preserved flame structures. Occasional 2-3cm concretion. 107.3m: 2cm quartz vein with po at 30 degrees to core axis. 121: «Cht Lam» 120-123m: Chert laminae 1-3mm white to greyish chert.	78 80	104.4-114.2: «I Si» Intense silica &/or albite alteration. 127m: Tourmaline needles in sericitic band.	Nil to traces po. 104.4-114.2m: Trace galena? 112.7-112.8m: Possible sphalerite frags. 2-3mm elliptical clasts over 10cm band of highly siliceous rock.	Dominated by thin bedded and laminated planar beds. Silica & biotite common. Medium beds rare, crossbeds rare. No pink spots (garnet). Geochems: 36342-36348: 104.8-111.5m. 36339-36341: 111.5-112.8m. 36349: 131.0-131.5m. 36350: 133.5-133.75m. 36351: 123.6-123.7m. Lithos: 36161: 139.3-142.3m. 36162: 112.8-113.8m. 36163: 122.3-122.4m. T? Geochems: 36352: 143.6-144.1m.

HOLE NUMBER: MM-91-03

DRILL HOLE RECORD

LOGGED BY: Colin Burge

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MINNOVA INC.
DRILL HOLE RECORD

[illegible]

HOLE NUMBER: MM-91-03

MINNOVA INC.
DRILL HOLE RECORD

DATE: 13-February-1992

FROM TO	ROCK TYPE	TEXTURE AND STRUCTURE	ANGLE TO CA	ALTERATION	MINERALIZATION	REMARKS
		358.6m: Disturbed beds. 376m END OF HOLE.	80		5cm 10-15% pyrrhotite. 306.5' «Po Lam» 5cm 10-15% pyrrhotite. 374.6m: Trace galena as subhedral cube. 375.1m: Pyrrhotite laminae trace chal- copyrite.	Generally; argillaceous waste zones more argillaceous than encountered in MM-02, MM-01.

HOLE NUMBER: MM-91-03

DRILL HOLE RECORD

LOGGED BY: Colin Burge

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HOLE NUMBER: MM-91-03

ASSAY SHEET

DATE: 13-February-1992

Sample	From (m)	To (m)	Length (m)	ASSAYS					GEOCHEMICAL											COMMENTS	
				Cu %	Pb %	Zn %	Ag g/t	Au g/t	Ag ppm	As ppm	Ba ppm	Cd ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au ppb	B ppm			BaT ppm
36342	104.80	105.80	1.00						1.2	2	22	0.1	83	19	1	16	21	33.4	115	55	
36343	105.80	106.80	1.00						1.2	1	32	0.1	39	20	1	14	16	154.6	240	75	
36344	106.80	107.80	1.00						1.2	17	42	0.1	76	17	1	25	20	91.8	213	105	
36345	107.80	108.80	1.00						1.3	5	44	0.1	18	27	1	16	1	210.6	414	100	
36346	108.80	109.80	1.00						1.2	11	87	0.1	9	20	1	42	1	123.9	755	265	
36347	109.80	110.80	1.00						1.4	4	65	0.1	13	20	1	29	3	234.5	796	240	
36348	110.80	111.50	0.70						1.6	3	80	0.1	5	20	1	25	4	64.4	805	160	
36339	111.50	112.00	0.50						1.4	6	64	0.1	73	22	1	20	19	39.2	532	90	
36340	112.00	112.70	0.70						1.6	3	64	0.1	7	20	1	10	2	50.7	898	85	
36341	112.70	112.80	0.10						1.4	4	59	0.1	6	20	1	9	18	270.7	923	115	
36351	123.60	123.70	0.10						1.3	1	155	0.1	5	15	1	28	2	230.8	936	220	
36349	131.00	131.50	0.50						1.2	11	130	0.1	76	22	1	57	1	141.7	995	150	
36350	133.50	133.75	0.25						1.4	4	91	0.1	6	16	1	16	2	207.2	807	440	
36352	143.60	144.10	0.50						1.1	11	153	0.1	18	14	1	33	1	216	734	335	
36353	159.50	160.00	0.50						1.1	4	145	0.1	21	19	1	30	1	257.8	426	220	
36354	165.90	166.40	0.50						1.2	1	105	0.1	11	17	1	26	3	81.7	371	135	
36355	237.50	238.00	0.50						1	1	117	0.1	47	17	1	48	2	286.2	443	265	
36356	263.60	263.70	0.10						0.8	1	131	0.1	100	13	1	35	4	186.3	1010	565	

HOLE NUMBER: MM-91-03

ASSAY SHEET

PAGE: 5

HOLE NUMBER: MM-91-03

GEOCHEM. SHEET

DATE: 13-February-1992

Sample	From (m)	To (m)	Length (m)	Al2O3 %	Ba %	CaO %	Fe2O3 %	K2O %	MgO %	MnO2 %	Na2O %	P2O5 %	SiO2 %	TiO2 %	S %	TOT %	Ag ppm	As ppm	Ba ppm	Cu ppm	Pb ppm	Sb ppm	Zn ppm	Au ppb	LOI %	B ppm	F ppm
36159	44.80	47.80	3.00	14.6	0.005	9.14	12.9	0.45	4.82	0.2	2.21	0.03	52.89	1.26	0.09	98.6	1.4	1	20	174	14	1	36	5	.8		
36160	84.40	87.50	3.10	14.49	0.005	9.59	11.29	0.51	6.56	0.18	2.14	0.01	52.31	0.99	0.09	98.16	1.2	1	20	124	13	1	26	10	.9		
36162	112.80	113.80	1.00	12.17	0.05	2.45	0.92	2.54	0.31	0.02	4.19	0.01	75.46	0.51	0.05	98.67	1.3	1	29	9	34	1	26	5	.7	34.6	370
36163	122.30	122.40	0.10	14.47	0.18	1.49	1.61	5.58	0.79	0.03	2.73	0.01	71.28	0.5	0.03	98.68	1	1	110	8	26	1	23	5	.6	2930.0	250
36161	139.30	142.30	3.00	14.14	0.08	0.34	2.5	4.17	0.58	0.05	3.45	0.01	72.42	0.59	0.13	98.46	1.1	1	71	15	36	1	52	5	.4	118.4	345
36164	160.70	163.70	3.00	12.31	0.025	1.22	4.62	2.9	1.03	0.07	2.82	0.01	72.96	0.5	0.07	98.53	0.8	1	126	17	21	1	51	5	.5	72.6	525
36165	185.00	188.00	3.00	13.64	0.04	1.28	4.03	3.11	0.98	0.06	3.09	0.01	71.19	0.47	0.08	97.98	0.6	2	145	17	20	1	57	5	1.2	96.5	610
36166	212.40	215.50	3.10	15.85	0.04	0.93	4.86	4.42	1.12	0.07	1.36	0.01	68.08	0.58	0.25	97.57	0.8	6	106	24	16	1	52	5	1.8	905.0	735
36167	236.10	239.10	3.00	16.71	0.035	2.48	3.89	3.63	0.9	0.08	2.95	0.01	65.6	0.66	0.35	97.28	0.8	1	79	20	24	1	43	5	2.0	148.1	450
36168	261.20	264.20	3.00	16.77	0.05	1.76	4.65	4.6	1.29	0.07	2.16	0.01	65.16	0.64	0.91	98.05	0.9	34	70	39	22	1	46	5	2.0	72.2	1040
36169	285.60	288.60	3.00	14.7	0.04	1.53	2.92	4.32	0.65	0.07	1.62	0.01	71.01	0.58	0.33	97.76	1	5	50	24	18	1	25	5	1.5	145.5	550
36170	316.10	319.10	3.00	14.77	0.02	1.68	4.54	3.42	1.1	0.1	2.39	0.01	69.65	0.54	0.39	98.61	0.8	1	84	27	17	1	41	5	1.1	77.5	1120
36171	340.50	343.50	3.00	15.2	0.04	1.33	3.54	4.54	0.95	0.09	1.64	0.01	69.72	0.59	0.14	97.78	0.8	1	75	16	17	1	34	5	1.3	232.0	630
36172	367.90	370.90	3.00	15.37	0.025	2.87	3.22	3.88	0.88	0.08	2.48	0.01	68.96	0.56	0.15	98.48	1	1	52	20	20	1	37	5	.7	201.1	655

HOLE NUMBER: MM-91-03

GEOCHEM. SHEET

PAGE: 6

Appendix IV
Geochemical Analytical Procedures



ANALYTICAL PROCEDURE REPORT FOR ASSESSMENT WORK:

PROCEDURE FOR TRACE ELEMENT ICP

Ag, Al, As, B, Ba, Be, Bi, Ca, Cd, Co, Cu,
Fe, K, Li, Mg, Mn, Mo, Na, Ni, P, Pb, Sb,
Sr, Th, U, V, Zn, Ga, Sn, W, Cr

Samples are processed by Min-En Laboratories, at 705 West 15th Street, North Vancouver, employing the following procedures.

After drying the samples at 95 C, soil and stream sediment samples are screened by 80 mesh sieve to obtain the minus 80 mesh fraction for analysis. The rock samples are crushed by a jaw crusher and pulverized on a ring mill pulverizer.

0.50 gram of the sample is digested for 2 hours with an aqua regia mixture. After cooling samples are diluted to standard volume.

The solutions are analyzed by computer operated Jarrall Ash 9000 ICAP or Jobin Yvon 70 Type II Inductively Coupled Plasma Spectrometers.



ANALYTICAL PRECEDURE REPORT FOR ASSESSMENT WORK:

PROCEDURE FOR WET GOLD GEOCHEMICAL ANALYSIS

Samples are processed by Min-En Laboratories, at 705 West 15th Street, North Vancouver, employing the following procedures.

After drying the samples at 95 C, soil and stream sediment samples are screened by 80 mesh sieve to obtain the minus 80 mesh fraction for analysis. The rock samples are crushed by a jaw crusher and pulverized on a ring mill pulverizer.

5.00 grams of sample is weighed into porcelain crucibles and cindered @ 800 C for 3 hours. Samples are then transferred to beakers and digested using aqua regia, diluted to volume and mixed.

Further oxidation and treatment of 75% of the above solution is then extracted for gold by Methyl Iso-butyl Ketone.

The MIBK solutions are analyzed on an atomic absorption spectrometer using a suitable standard set.



ANALYTICAL PROCEDURE FOR ASSESSMENT WORK

WHOLE ROCK ANALYSIS

Samples are processed by Min-En Laboratories at 705 West 15th Street, North Vancouver, employing the following procedures.

After drying the samples at 95 C, soil and stream sediment samples are screened to -80 mesh for analysis. Rock samples are crushed by a jaw crusher and pulverized to 90% -120 mesh.

A 0.200 gram subsample is fused using lithium metaborate, dissolved and diluted to standard volume.

The solutions are analyzed by computer operated Jarrall Ash 9000 ICAP or Jobin Yvon Type II Inductively Coupled Plasma Spectrometers.



ANALYTICAL PROCEDURE FOR ASSESSMENT WORK

Boron Geochem

Samples are processed by Min-En Laboratories at 705 West 15th Street, North Vancouver, employing the following procedures:

After drying the samples at 95 degrees celsius, soil and stream sediment samples are screened to -80 mesh for analysis. Rock samples are crushed by a jaw crusher and then pulverized to 90% -120 mesh.

A 0.500 gram sub-sample is fused using KOH, leached overnight and then dissolved using HCL. The solution is diluted to volume and mixed.

The solutions are analyzed by computer operated Jarell Ash 9000 ICAP or Jobin Yvon Type II Inductively Coupled Plasma Spectrometers. The results are compared to certified natural standards.



ANALYTICAL PROCEDURE FOR ASSESSMENT WORK

Fluorine Geochem

Samples are processed by Min-En Laboratories at 705 West 15th Street, North Vancouver, employing the following procedures:

After drying the samples at 95 degrees celsius, soil and stream sediment samples are screened to -80 mesh for analysis. Rock samples are crushed by a jaw crusher and then pulverized to 90% -120 mesh.

A 0.200 gram sub-sample is fused using NaOH, leached overnight with water and then dissolved using H₂SO₄. A buffer is added and the sample is adjusted to pH 7.0 using NaOH.

The solutions are analyzed using specific ion electrodes and compared to known certified natural standards.

Appendix V
Geochemical Results

ATTN: COLIN BURGE

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2
(604)980-5814 OR (604)988-4524

* ROCK * (ACT:F26)

[illegible]

MIN-EN LABS — ICP REPORT
705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2
(604)980-5814 OR (604)988-4524

FILE NO: 1V-1185-RJ1
DATE: 91/10/16
* ROCK * (ACT:F31)

[illegible]



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NORTH VANCOUVER, B.C. CANADA V7M 1T2
TELEPHONE (604) 980-5814 OR (604) 988-4524
FAX (604) 980-9621

SMITHERS LAB.:
3176 TATLOW ROAD
SMITHERS, B.C. CANADA V0J 2N0
TELEPHONE (604) 847-3004
FAX (604) 847-3005

Assay Certificate

1V-1185-RA1

Company: **MINNOVA INC.**
Project: **674**
Attn: **COLIN BURGE**

Date: **OCT-16-91**
Copy 1. **MINNOVA INC., VANCOUVER, B.C.**

**We hereby certify the following Assay of 9 ROCK samples
submitted SEP-30-91 by COLIN BURGE.**

Sample Number	LOI %
36126	.90
36134	.60
36135	2.30
36136	2.20
36137	2.80
36138	2.40
36139	2.20
36140	1.90
36141	1.80

Certified by

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FAX (604) 980-8621

SMITHERS LAB.:
3176 TATLOW ROAD
SMITHERS, B.C. CANADA V0J 2N0
TELEPHONE (604) 847-3004
FAX (604) 847-3005

Geochemical Analysis Certificate

1V-1185-RG1

Company: MINNOVA INC.
Project: 674
Attn: COLIN BURGE

Date: OCT-22-91
Copy 1. MINNOVA INC., VANCOUVER, B.C.

We hereby certify the following Geochemical Analysis of CORE samples submitted SEP-30-91 by COLIN BURGE.

Sample Number	B PPM	F PPM
36126	51.5	315
36134	64.9	295
36135	149.0	565
36136	61.6	590
36137	155.6	490
36138	148.6	600
36139	81.0	570
36140	77.6	485
36141	104.2	515

Certified by

MIN-EN LABORATORIES

ATTN: COLIN BURGE

MIN-EN LABS — ICP REPORT

(604)980-5814 OR (604)988-4524

FILE NO: 1V-1184-RL1

DATE: 91/10/11

* CORE * (ACT:F26)

[illegible]

COMP: MINNOVA INC.

PROJ: 674

ATTN: COLIN BURGE

MIN-EN LABS — ICP REPORT

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2

(604)980-5814 OR (604)988-4524

FILE NO: 1V-1184-RJ1

DATE: 91/10/11

* CORE * (ACT:F31)

[illegible]



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SMITHERS LAB.:
3176 TATLOW ROAD
SMITHERS, B.C. CANADA V0J 2N0
TELEPHONE (604) 847-3004
FAX (604) 847-3005

Assay Certificate

1V-1184-RA1

Company: MINNOVA INC.
Project: 474
Attn: COLIN BURGE

Ans'd

Copy 1. MINNOVA INC., VANCOUVER, B.C.

Date: OCT-11-91

We hereby certify the following Assay of 7 CORE samples
submitted SEP-30-91 by COLIN BURGE.

Sample Number	LOI %
36127	.40
36128	.20
36129	.90
36130	.70
36131	1.00
36132	1.20
36133	1.30

MM-91-01

Certified by

Barbara

FILE NO: 1V-1227-RL1
DATE: 91/10/18
* ROCK * (ACT:F26)

[illegible]

COMP: MINNOVA INC.

PROJ: 674

ATTN: COLIN BURGE

MIN-EN LABS — ICP REPORT

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2

(604)980-5814 OR (604)988-4524

FILE NO: 1V-1227-RJ1

DATE: 91/10/18

* ROCK * (ACT:E31)

SAMPLE NUMBER	AG PPM	AS PPM	BA PPM	CU PPM	PB PPM	SB PPM	ZN PPM	AU-WET PPB
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[illegible]



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SMITHERS LAB.:
3176 TATLOW ROAD
SMITHERS, B.C. CANADA V0J 2N0
TELEPHONE (604) 847-3004
FAX (604) 847-3005

Assay Certificate

1V-1227-RA1

Company: MINNOVA INC.
Project: 674
Attn: COLIN BURGE

Date: OCT-18-91
Copy 1. MINNOVA INC., VANCOUVER, B.C.

We hereby certify the following Assay of 26 ROCK samples
submitted OCT-07-91 by COLIN BURGE.

Sample Number	LOI %
------------------	----------

36144	.90
36145	1.80
36146	1.50

36147	2.20
36148	2.00
36149	1.90
36150	2.50
36151	1.00

36152	2.90
36153	2.80
36154	2.20
36155	2.50
36156	3.60

36157	10.50
-------	-------

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SMITHERS LAB.:
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SMITHERS, B.C. CANADA V0J 2N0
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FAX (604) 847-3006

Geochemical Analysis Certificate

1V-1227-RG1

Company: MINNOVA INC.
Project: 674
Attn: COLIN BURGE

OCT 28 1991

Date: OCT-25-91

Copy 1. MINNOVA INC., VANCOUVER, B.C.

We hereby certify the following Geochemical Analysis of 26 ROCK samples submitted OCT-07-91 by COLIN BURGE.

Sample Number	B PPM	F PPM
------------------	----------	----------

36144	41.0	195
36145	104.3	530
36146	75.1	430

36147	126.5	515
36148	75.8	645
36149	53.5	600
36150	80.0	335
36151	68.1	465

36152	107.2	475
36153	108.2	815
36154	109.6	840
36155	104.8	605
36156	66.1	680

36157	71.9	385
-------	------	-----

Certified by

MIN-EN LABORATORIES

ATTN: COLIN BURGE

(604)980-5814 OR (604)988-4524

* CORE * (ACT:F26)

[illegible]

COMP: MINNOVA INC.

PRQJ: 674

ATTN: COLIN BURGE

MIN-EN LABS — ICP REPORT

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2

(604)980-5814 OR (604)988-4524

FILE NO: 1V-1247-RJ1

DATE: 91/10/19

* CORE * (ACT:F31)

[illegible]



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SMITHERS LAB.:
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SMITHERS, B.C. CANADA V0J 2N0
TELEPHONE (604) 847-3004
FAX (604) 847-3005

Assay Certificate

1V-1247-RA1

Company: MINNOVA INC.
Project: 674
Attn: COLIN BURGE

Date: OCT-19-91
Copy 1. MINNOVA INC., VANCOUVER, B.C.

We hereby certify the following Assay of 16 CORE samples
submitted OCT-09-91 by COLIN BURGE.

Sample LOI
Number %

36158	2.40
36161	.70
36162	.60
36163	.40
36164	.50
36165	1.20
36166	1.80
36167	2.00
36168	2.00
36169	1.50
36170	1.10
36171	1.30
36172	.70

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NORTH VANCOUVER, B.C. CANADA - V7M 1T2
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SMITHERS LAB.:

3176 TATLOW ROAD
SMITHERS, B.C. CANADA V0J 2N0
TELEPHONE (604) 847-3004
FAX (604) 847-3005

Geochemical Analysis Certificate

1V-1247-RG1

Company: **MINNOVA INC.**
Project: 674
Attn: COLIN BURGE

Date: OCT-25-91

Copy 1. MINNOVA INC., VANCOUVER, B.C.

We hereby certify the following Geochemical Analysis of 16 CORE samples submitted OCT-09-91 by COLIN BURGE.

Sample Number	B PPM	F PPM
------------------	----------	----------

36158	159.5	700
36161	34.6	370

36162	2930.0	250
36163	118.4	345
36164	72.6	525
36165	96.5	610
36166	905.0	735

36167	148.1	450
36168	72.2	1040
36169	145.5	550
36170	77.5	1120
36171	232.0	630

36172	201.1	655
-------	-------	-----

Certified by _____

MIN-EN LABORATORIES

COMP: MINNOVA INC.
PROJ: 674
ATTN: COLIN BURGE

MIN-EN LABS -- ICP REPORT

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2
(604)980-5814 OR (604)988-4524

FILE NO: 1V-1228-RJ1

DATE: 91/10/22

* CORE * (ACT:F31)

[illegible]



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SMITHERS LAB.:

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Geochemical Analysis Certificate

1V-1228-RG1

Company: **MINNOVA INC.**
Project: **674**
Attn: **COLIN BURGE**

Date: **OCT-22-91**

Copy 1. MINNOVA INC., VANCOUVER, B.C.

OCT 25 1991

We hereby certify the following Geochemical Analysis of 16 CORE samples submitted OCT-07-91 by COLIN BURGE.

Sample Number	B	BA-TOTAL	F
	PPM	PPM	PPM
36309	79.5	1120	260
36310	35.8	283	170
36311	101.2	1080	365
36312	99.9	823	385
36313	41.1	685	150
36314	28.9	207	130
36315	26.0	180	80
36316	79.4	885	405
36317	116.0	965	355
36318	166.6	902	145
36319	143.3	1320	100
36320	89.2	574	545
36321	81.1	375	315
36322	115.8	608	580
36323	57.5	136	205
36324	51.0	132	415

Certified by

COMP: MINNOVA INC.

PROJ: 674

ATTN: SHAWN MCCALLUM

MIN-EN LABS — ICP REPORT

705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2

(604)980-5814 OR (604)988-4524

FILE NO: 1V-1229-RJ1

DATE: 91/10/22

* CORE * (ACT:F31)

[illegible]



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SMITHERS LAB.:
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SMITHERS, B.C. CANADA V0J 2N0
TELEPHONE (604) 847-3004
FAX (604) 847-3005

Geochemical Analysis Certificate

1V-1229-RG1

Company: **MINNOVA INC.**
Project: 674
Attn: SHAWN MCCALLUM

Date: OCT-22-91

Copy 1. MINNOVA INC., VANCOUVER, B.C.

We hereby certify the following Geochemical Analysis of 13 CORE samples submitted OCT-07-91 by SHAWN MCCALLUM.

Sample Number	B PPM	BA-TOTAL PPM	F PPM
36325	83.9	129	140
36326	52.2	671	315
36327	72.0	132	100
36328	103.6	730	330
36329	93.5	995	365
36330	55.5	954	425
36331	122.1	874	175
36332	73.9	1040	165
36333	125.9	1010	365
36334	150.3	909	95
36335	44.2	781	200
36336	11.5	217	300
36337	6.4	223	460

Certified by

ATTN: COLIN BURGE

MIN-EN LABS — ICP REPORT

(604)980-5814 OR (604)988-4524

FILE NO: 1V-1248-RJ1

DATE: 91/10/22

* CORE * (ACT:F31)

[illegible]



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SMITHERS LAB.:
3176 TATLOW ROAD
SMITHERS, B.C. CANADA V0J 2N0
TELEPHONE (604) 847-3004
FAX (604) 847-3005

Geochemical Analysis Certificate

1V-1248-RG1

Company: MINNOVA INC.
Project: 674
Attn: COLIN BURGE

OCT 25 1991

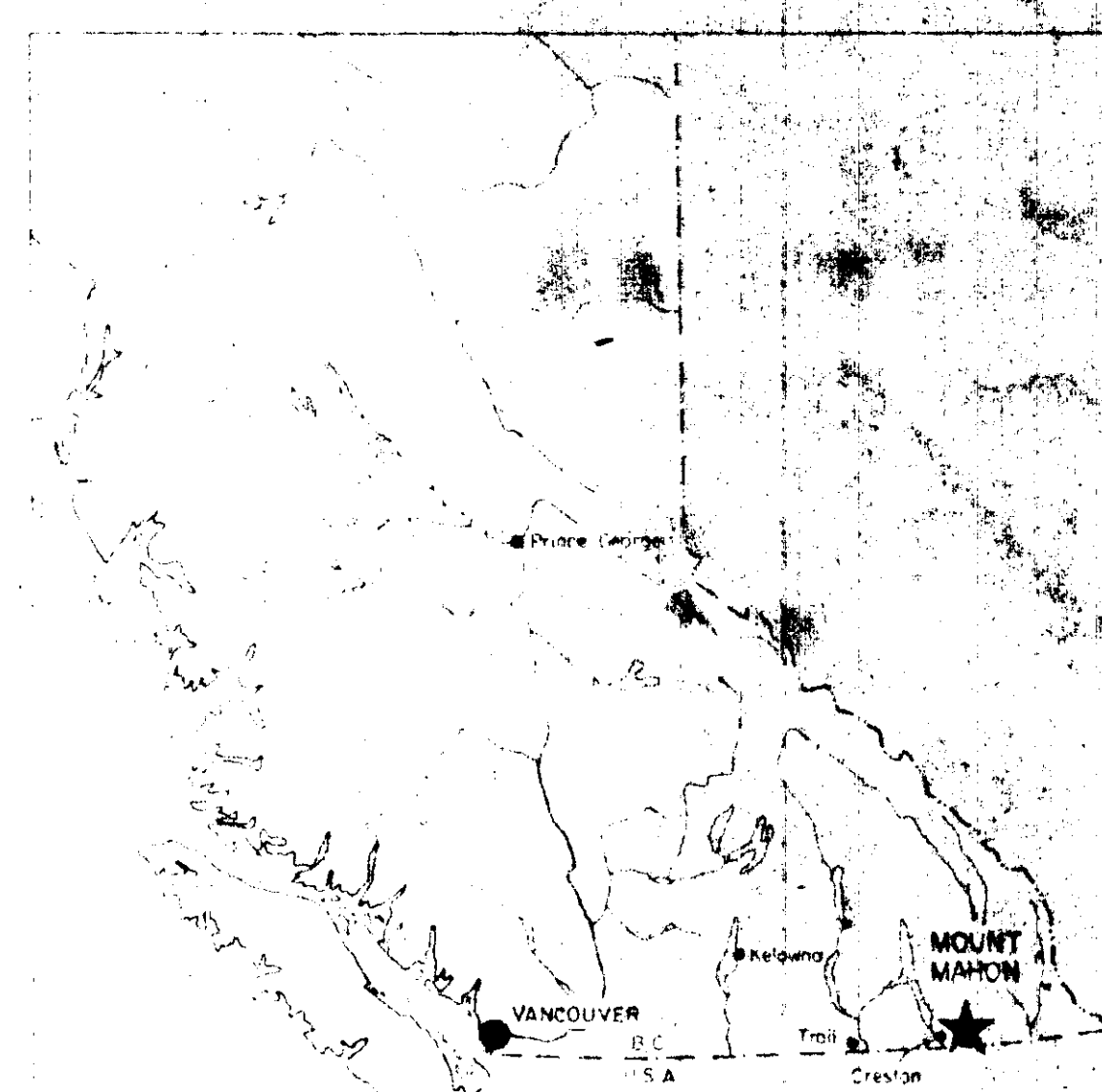
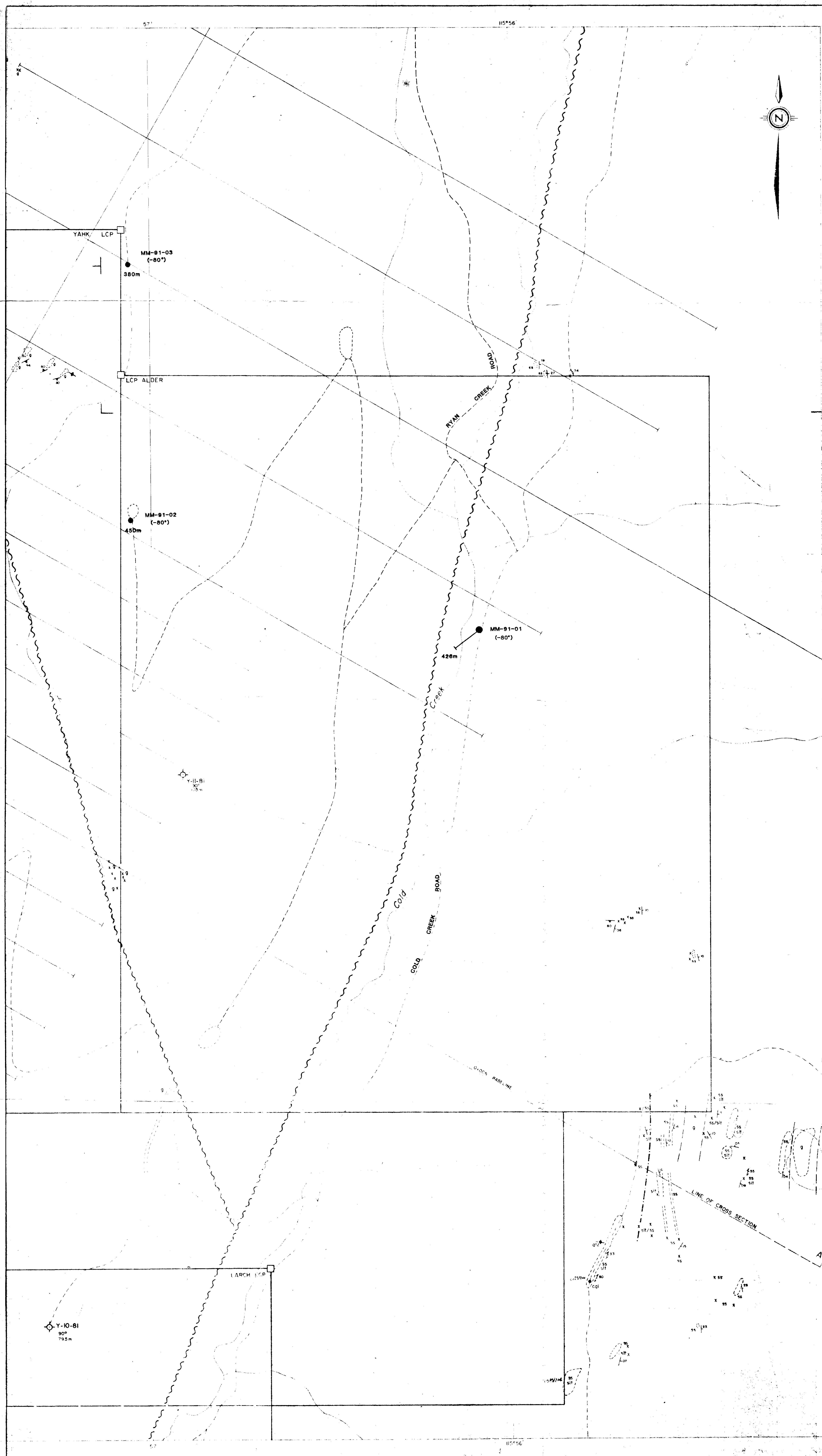
Date: OCT-22-91

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We hereby certify the following Geochemical Analysis of 19 CORES samples submitted OCT-09-91 by COLIN BURGE.

Sample Number	B PPM	BA-TOTAL PPM	F PPM
36338	48.2	156	1500
36339	39.2	532	90
36340	50.7	898	85
36341	270.7	923	115
36342	33.4	115	55
36343	154.6	240	75
36344	91.8	213	105
36345	210.6	414	100
36346	123.9	755	265
36347	234.5	796	240
36348	64.4	805	160
36349	141.7	995	150
36350	207.2	807	440
36351	230.8	936	220
36352	216.0	734	335
36353	257.8	426	220
36354	81.7	371	135
36355	286.2	443	265
36356	186.3	1010	565

Certified by



LEGEND

MOYIE INTRUSIONS

GABBRO AND DIORITE
dark grey to green-grey, medium to coarse grained

ALDRIDGE FORMATION

SANDSTONE
light grey weathering, light to medium grey, fine to very fine grained, occasionally argillaceous. Beds generally 10 to 70cm thick; sedimentary structures include graded bedding, also load casts, flame structures, and ripple marks at base. Intervals of 1 to 10cm thick laminated siltstone and/or dark grey argillite at top (AE, AB and ABE turbidites?). Occasional thin-bedded, cross-bedded, very fine grained sandstone alternating with silty thick beds of dark grey argillite and/or tourmalinitized argillite.

SILTSTONE
rusty weathering, light to medium grey, finely laminated; also dark grey to rusty weathering, laminated; couplets of medium grey siltstone and dark grey carbonaceous and/or argillaceous siltstone.

ARGILLITE
medium to dark grey. Typically as thin beds or laminae within argillite/siltstone couplets, or as relatively thin horizons at the top of graded sandstone beds. Commonly tourmalinitized in the vicinity of Mt. Mahon. Porphyroblasts of biotite and/or feldspar often present.

CONGLOMERATE
typically consists of angular to subangular flat fragments (up to 18cm long) of dark grey argillite, tourmalinitized argillite, and/or laminated siltstone/argillite within a fine to very fine grained sandstone matrix; conglomerate is intraformational.

TOURMALINITE
black weathering, dark grey to black tourmalinitized rock. Most commonly occurs as 2cm thick layers of aphanitic cherty rock, comprised of 40 to 60% very fine, foliated tourmaline crystals, which replaces argillite at the top of graded sandstone beds, or in thinly bedded sandstone/tourmalinitized argillite couplets. Similar tourmalinite occurs as fragments within intraformational conglomerate. Less commonly it occurs in thicker sandstone beds as very fine foliated tourmaline between sand-sized quartz grains.

- ▼ TOURMALINITE, float
- Pyrrhotite, disseminated, #2%
- Bedding (inclined, horizontal)
- Cleavage or Schistosity (inclined)
- Joints (inclined, vertical)
- Quartz Vein (parallel to joint set)
- Quartz Vein (inclined, vertical)
- Current Direction (from cross bedding)
- Current Trend (from ripple marks)
- Current Trend (from sole marks)
- Outcrop
- Fault
- Diamond Drill Hole (inclination, total depth)
- Grid Line
- Road
- Topographic Contour (100 foot contour interval)
- Stream
- Line of Cross Section
- Claim Boundary and legal Corner Post
- 1991 DRILL HOLE LOCATION

GEOLOGICAL BRANCH ASSESSMENT REPORT

22,197

0 100 200 300 400 500 metres

MINNOVA INC.

P/c MOUNT MAHON GEOLOGY

FIGURE 3		PROJECT NO.	
DATE: 1995	REVISIONS:	SCALE: 1:5000	FILE NO.
BY: JCG/AA			
MIN. ENG. BY: L. DECKER / P. SCHUBERT			