Project:

Logged by: Drilling Co: **AUMO Denton Twp**

Date:

Setup:

December 29, 1998 Robert Calhoun

42A05SE2009

2.20574

DENTON

010

Claim Number: P11152 Patent

Colbert Drilling

COLLAR LOCATION: L200E/355S

DDH: EM98-1

SURVEYS: Acid Test

Depth

<u>0.0m</u> 135,0m **Azimuth** 300° 300°

<u>-40°</u> <u>-34°</u>

Dip

TIMMINS COORDINATES

Northing:

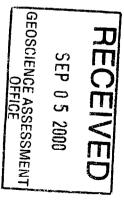
Easting

Elevation: 0.0 meters TD: 255 meters

DRILLING DATES

Started: December 29, 1998 Finished: December 31, 1998





GRID COORDINATES

355S

200E

Project: AUMO Denton Twp Date: December 29, 1998 Logged By: R. Calhoun DDH: EM98-1

GEOLOGIC SUMMARY

<u> </u>			
FROM TO	DESCRIPTION	INTERVAL	SIGNIFICANT ASSAY AVERAGES

(m)	(m)		From	То	Width	Cu	Zn	Pb	Ag	Au
			(m)	(m)	(m)	ppm	ppm	ppm	ppm	ppb
0.0	3.0	Overburden						:		
3.0	32.3	Felsic to Intermediate Volcanic								
32.3	108.0	Intermediate Volcanic	1							
108.0	116.0	Mafic to Intermediate Tuff								
116.0	122.0	Felsic Volcanic	1							
122.0	129.7	Mafic to Intermediate Volcanic							• •	22
129.7	138.6	Felsic Tuff/Argillite/Quartz Veining	133.0	138.9	5.9	986	4817	21	2.0	22
138.6	144.8	Intermediate Tuff				1				
144.8	158.8	Intermediate (Mafic) Volcanic			Į		Ì			
158.8	161.8	Intermediate Volcanic					ļ			
161.8	181.6	Mafic Volcanic					ŀ			
181.6	189.7	Mafic Volcanic			! 					1
189.7	255.0	Intermediate to Mafic Volcanic			1]			
255.0		End of Hole								Ì
	i									
						1		}		
							1			
1										

COMMENTS

Signature:

Property: Denton AUMO Hole Number: EM98-1 Claim Number: Patent # P11152

Location: <u>L200E/355S</u> Final Depth: <u>255 meters</u> Logged By: <u>Robert Calhoun</u>

Azimuth: 300° Dates Drilled: Dec 29-31/98 Drilled By: Colbert Drilling

Dip: <u>-40°</u> Dates Logged: <u>Dec 30-31/98</u>

	,						Assay	S			
From	То	Description	Sample #	From	То	Length (meter)	Cu ppm	Zn ppm	Pb ppm	Ag g/ton	Au ppb
0	3.0	Overburden									
3.0	32.3	Felsic to Intermediate Volcanic -fine to medium grained, light grey green to medium green grey, siliceous to silicified. The unit is layered with lapilli to fragmental layers and fine grained medium grey thinly bedded. Alteration is as layers of sericite rich tuff bleached to beige to pale green. The layering continues to 18.0 meters. Layering 49° to core axis. 3.0-18.0-sulfides of pyrrhotite and chalcopyrite and pyrite occurs locally in "layers" to 1 meter. Pyrrhotite is up to 25% as fracture controlled veinlets to clots. 18.0-32.3-chaotic section with probable flow fractures and fragments, siliceous, bleached, small circular lapilli dark green. Alteration is sericite, silicification and bleaching. Sulfides are minor to nil.	1667 1668 1669 1670	8.7 10.2 16.5 17.8	10.2 11.7 17.8 19.2	1.5 1.5 1.3 1.4	244 214 456 236	62 49 42 46	1 1 1 1	0.2 0.2 0.5 0.4	3 7 14 12
32.3	108.0	Intermediate Volcanic -fine grained, medium green grey to grey green, weakly foliated tuff. Unit is relatively featureless with local layers of very fine tuff, pale grey, minor to locally abundant dark grey to green spots probable hyaloclastic material, occasional rimmed with feldspathic bleaching. Contact with upper unit is 20cm quartz vein. Unit is weakly to locally moderately siliceous. Quartz veining as 4 to 10cm veins less than 5% of unit. Sulfides are nil to trace.									

							Assay	S			
From	То	Description	Sample #	From	То	Length (meter)	Cu ppm	Zn ppm	Pb ppm	Ag g/ton	Au ppb
		67.2-100.6-this section contains "layers" of feldspar porphyry interbedded with fine tuff. The porphyry sections form sharp contacts with the fine tuff but the contacts vary from 30° to core axis to contorted. These may be synvolcanic intrusives or porphyritic tuff layers. The feldspar phenocrysts are white up to 4mm, with occasional dark centers, they are sub-angular to angular, quartz "eyes" where present are small. The tuff between the porphyry layers are medium grained, contain ghost feldspars and are greyer than above. Occasionally the porphyry layers are less than 20cm in length, some longer sections are as follows. 67.2-70.7; 73.4-75.5; 77.2-79.7; 88.2-100.6. The longer section 88.1-100.6 contains finer grey tuff sections? 3-10cm in length with small quartz veins in each section <5mm wide with associated calcite carbonate. Porphyry matrix is weakly calcitic. Feldspar in this section make up to 60% of rock volume. One of these finer sections contain a pyrrhotite veinlet <2mm wide.	1789 1790 1791 1792 1793 1794 1795 1796 1797 1798 1799 1800 1801 1802	67.2 68.7 73.4 75.0 76.5 78.0 88.2 90.0 91.5 93.0 94.5 96.0 97.5 99.0	68.7 70.6 75.0 76.5 78.0 79.6 90.0 91.5 93.0 94.5 99.0 100.6	1.5 1.9 1.6 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5	-	-			7 2 3 17 nil 2 5 31 36 7 7 17 9
108.0	116.0	Mafic to Intermediate Tuff -fine grained, medium green to green grey similar to above but contains more mafic material. This unit has chloritic patches which appear like pillow selvages. Unit is siliceous, feldspathic altered with white to beige alteration with local bleaches. Sulfides of pyrrhotite/ pyrite increase in this section with pyrite cubes to 1cm and pyrrhotite as clusters to clots. Sulfides 1%.									
116.0	122.0	Felsic Volcanic -fine grained, medium grey to green beige, sericitic. Unit is coarsely bedded to thinly laminated with green sericitic interbedded with pale grey siliceous layers, small quartz eyes occur in layers to 30cm in length. 116.0-120.5-sericitic layer with local sulfides of pyrite/pyrrhotite up to 15% over 40cm, 2% total for section.	1671 1672 1673	117.0 118.0 119.0	118.0 119.0 120.5	1.0	29 43 8	9 23 49	1 1 1	0.1 0.2 0.2	nil nit nil

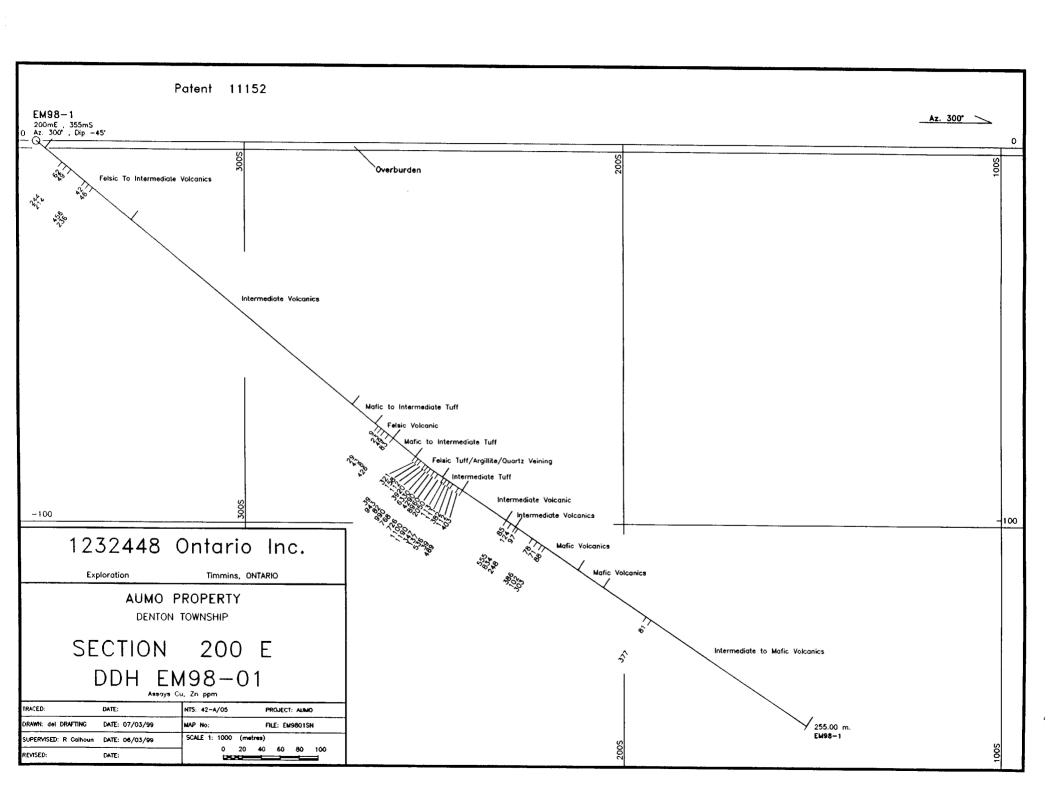
							Assa	ys			
From	То	Description	Sample #	From	То	Length (meter)	Cu ppm	Zn ppm	Pb ppm	Ag g/ton	Au ppb
		120.5-122.0-Argillite to cherty argillite weakly graphitic, with pyrrhotite pyrite and chalcopyrite. Small quartz carbonate veins. Sulfides to 35%, locally	1674	120.5	122.0	1.5	426	83	8	0.7	10
		semi-massive fracture veins to clots. This section also contains possible tourmaline.		-							
122.0	129.7	Mafic to Intermediate Tuff -as 108-116 above.									
129.7	138.6	Felsic Tuff/Argillite/Quartz veining -this is a mixture zone of fine tuff, pale green, sericitic thinly laminated with quartz veining and a bed of graphitic argillite siliceous.									
		129.7-131.4-quartz vein with massive sulfide layers of pyrrhotite at upper contact, pyrite/ pyrrhotite in center band and mainly pyrite with pyrrhotite at lower contact. Massive bands are 15cm, 40cm and 25cm respectively with disseminated sulfides on fractures in quartz veins. Sulfides are 50-60% of section. Chalcopyrite/sphalerite minor.	1675 1676	129.7 130.6	130.6 131.4	0.9 0.8	39 943	321 158	1 36	0.5 1.3	nil 79
		131.4-133.0-finely bedded tuff to tuff fragmental towards top of section. Pyrrhotite/pyrite 8-10% as fine disseminations and small discontinuous veinlets.	1677	131.4	133.0	1.6	82	112	5	0.3	nil
		133.0-134.7-Argillite to graphitic argillite thinly bedded, siliceous can not be scratched with a knife. Section contains pyrrhotite to 25% as veins and clots. Chalcopyrite is locally abundant, possible minor sphalerite.	1678 1679	133.0 133.8	133.8 134.7	0.8 0.9	990 768	3920 6330	30 18	1.5 1.5	24 27
		134.7-135.9-tuff with argillaceous component, pyrite/ pyrrhotite as veinlets thin layers and clusters. Chalcopyrite minor, sphalerite as clusters and grains up to 1%.	1680	134.7	135.9	1.2	726	4290	12	1.0	14
		135.9-138.6-thinly laminated tuff with layers of fine sulfides of pyrrhotite, pyrite. Chalcopyrite <1%, sphalerite as grains and clusters <1%. Quartz veining <5% of unit. Unit is sericitic.	1681 1682	135.9 137.1	137.1 138.9	1.2 1.5	1100 1190	8960 2050	4	2.0 2.2	24 21
138.6	144.8	Intermediate Tuff -fine grained, light to medium green grey, with massive layers and thinly laminated sections. Pyrrhotite, pyrite	1683	138.6	139.8	1.2	347	113	1	0.3	53

							Assa	ys			
From	То	Description	Sample #	From	То	Length (meter)	Çu ppm	Zn ppm	Pb ppm	Ag g/ton	Au ppb
		occurs as massive veinlets to clusters mainly in the thinly laminated section. Chalcopyrite as small veinlets and knots to 1%	1684 1685 1686 1687	139.8 140.8 141.8 143.6	140.8 141.8 143.6 144.8	1.0 1.0 1.8 1.2	137 536 39 469	111 382 112 403	1 1 1 6	0.2 1.1 0.1 0.5	2 15 nil 17
144.8	158.8	Intermediate (Mafic) Volcanic -medium to fine grained, medium green to light green towards bottom of sections. Unit is medium grained to 154.6m with 5% quartz/calcite veins, become fine grained, lighter green to end of section, minor quartz, nil sulfides.									
158.8	161.8	Intermediate Volcanic -laminated-fine grained, medium to dark green, banded, probably flow bands with alternating pale green to greyish and dark green layers. Unit has variable sulfides of pyrrhotite/pyrite and chalcopyrite. Sulfides occur as massive veinlets clusters and disseminations. Chalcopyrite can be up to 1% over 10-15cm as clusters in pyrrhotite and discontinuous veinlets <1mm wide. Sulfides are up to 25% of section. Layering 50° to core axis.	1688 1689	158.8 160.3	160.3 161.8	1.5 1.5	555 834	85 124	1 3	0.8 1.3	17 7
161.8	181.6	Mafic Volcanic -fine to medium grained, light to medium green, weakly to moderately altered, with dark grains or spots (hyaloclastite?) minor tourmaline. Unit is locally siliceous with feldspathic alteration. 161.8-162.5-5% pyrrhotite as massive veinlet with chalcopyrite and pyrite cubes to 4mm. This unit is probably pillowed with selvages marked by increased chlorite in selvages with pillow fragments giving it a chaotic appearance, pillow rims are bleached, siliceous, and locally the unit contains leucoxene. Pyrrhotite occurs in "selvages" as at 167.4-171.4, chalcopyrite occurs as blebs in the pyrrhotite. Pyrrhotite decreases down section but pyrite becomes more abundant to 1% towards lower contact.	1690 1691 1692 1693	161.8 167.1 168.6 170.1	162.5 168.6 170.1 171.1	0.7 1.5 1.5 1.0	248 386 102 303	97 78 71 88	4 1 1 1 1	0.7 0.5 0.2 0.6	nil 9 3 7

	,		Assays										
From	То	Description	Sample #	From	То	Length (meter)	Cu ppm	Zn ppm	Pb ppm	Ag g/ton	Au ppb		
181.6	189.7	Mafic Volcanic -fine grained, light to medium grey green, massive but possibly still pillowed but pillows are much larger than above and unit is less chaotic and less altered. Sulfides are nil to trace. Upper contact quartz vein. Lower contact 23° to core axis.											
189.7	255.0	Intermediate to Mafic Volcanic -fine to locally medium grained, light grey to whitish to medium grey. The unit has feldspathic alteration, whitish to pale beige white giving core a mottled appearance. There are feldspars, white with occasional dark centres occurring in layers up to 0.5m within fine grained non "porphyritic" sections. The unit is weakly foliated to layered. The occurrence of the feldspar phenocrysts or possible amygdules may be amygdule concentrations at pillow rims?? But no selvages are evident. The unit is weakly silicified. The layering may also be flow layering which is more likely. Down hole, sericite increases locally. Sulfides of pyrrhotite, mainly; minor pyrite and chalcopyrite occur randomly as discontinuous veinlets, clusters and occasionally as fragments, stretched to 1.5cm flattened to 0.5cm. Most abundant occurrence if from 198.0- 205.0m. Chalcopyrite is minor. 216.8-220.4-sericitic section, this section is more granular in appearance which may be the carbonate in the matrix. Calcite occurs as grains and small veinlets <2mm wide. 220.4-229.9-this section is more obviously layered sericitic. Sericite decreases down section with silica and feldspar increasing towards end of section. Porphyritic nature continues with local porphyroblasts to 0.5cm. 229.9-239.6-mafic volcanic section-medium grained, possible pillows, contact 65° to core axis. 239.6-253.4-feldspar/silica rich sections with white feldsparts and small <1m sections of fine ash volcanic. 253.4-255.0-mafic section, medium green to grey, massive generally featureless	1694	203.4	204.9	1.5	377	81	1	0.8	11		

Hole # EM98-1

						Assa	ys			
From To	Description	Sample #	From	То	Length (meter)	Cu ppm	Zn ppm	Pb ppm	Ag g/ton	Au ppb
255.0	End Of Hole Acid Test 135.0m -34° The following samples were re-assayed, Au only by, crushing the entire sample, rolling to homogenize it and assaying a one ton assay sample.	1679 1680 1681 1682 1683 1684 1685 1686 1687	133.8 134.7 135.9 137.1 138.6 139.8 140.8 141.8 143.6	134.7 135.9 137.1 138.6 139.8 140.8 141.8 143.6 144.8	0.9 1.2 1.5 1.5 1.0 1.0 1.8 1.2				-	38 14 21 19 82 5 15 14



Project:

Setup:

AUMO Denton Twp

Date: Logged by:

January 8-11, 1999 Robert Calhoun

Drilling Co: Colbert Drilling

42A05SE2009

DENTON 2.20574

020

DDH: EM99-2

COLLAR LOCATION: L600E/050S

SURVEYS: Acid Test

Claim Number: P17405 Patent

Depth

0.0m

135.0m

Azimuth

150° 150°

<u>-70°</u> <u>-63°</u>

Dip

Northing:

Elevation: 0.0 meters

DRILLING DATES

Started: January 8, 1999 Finished: January 11, 1999

GEOSCIENCE ASSESSMENT

GRID COORDINATES

050S

600E

TIMMINS COORDINATES

Easting

TD: 194.7 meters

Project: AUMO Denton Twp Date: January 11, 1999 Logged By: R. Calhoun

DDH: EM99-2

GEOLOGIC SUMMARY

ROM	TO	DESCRIPTION	I	NTERVAL	,	SIC	BNIFICAN	IT ASSAY	AVERAC	SES
(m)	(m)		From (m)	To (m)	Width (m)	Cu ppm	Zn ppm	Pb	Ag	Au
0.0	15.8	Overburden				pp	ppiii	ppm	ppm	pp
15.8	24.6	Argillite/Graphitic Argillite/Sulfides	15.8	17.5	1.7	710	3280	31	2.0	
24.6	29.1	Foliated Sericite Tuff	19.2	21.3	2.1	788	1950	i !	2.0	36
29.1	37.9	Tuff		21.5	2.1	700	1930	48	1.8	202
37.9	45.2	Mafic Volcanic						ľ		
45.2	53.2	Mafic Volcanic								
53.2	85.3	Mafic Volcanic								
85.3	90.8	Felsic Porphyry					1			
90.8	132.3	Mafic Volcanic							ļ	
132.3	137.4	Porphyry							-	
37.4	148.2	Mafic Volcanic		i						
148.2	155.1	Porphyry								
155.1	194.7	Mafic Volcanic							ľ	
		Wane Volcanic							1	
1									ľ	
ļ			1							
Ì										
			1				1		į	
									ļ	

COMMENTS	I.D. obososabilia	
COMMITTE	I.P. chargeability anomaly	

Property: Denton AUMO

Hole Number: EM99-2

Claim Number: 17405 Patent

Location: L600E/050S

Final Depth: 194.7 meters

Logged By: Robert Calhoun

Azimuth: Grid South 150°

Dates Drilled: Jan 8-10, 1999

Drilled By: Colbert Drilling

Dip: <u>-70°</u>

Dates Logged: Jan 9-11, 1999

Signature:

From	То	Decodation					<u>Assay</u>	S			
	10	Description	Sample #	From	То	Length (meter)	Cu ppm	Zn ppm	Pb ppm	Ag g/ton	Au ppb
0	15.8	Overburden									FF
15.8	24.6	Argillite/Graphitic Argillite/Sulfides -fine grained, dark grey to black silicified argillite, interbedded with siltstone to fine sand size, tuffaceous layers, minor. The argillitic sections contain massive sulfides as small veinlets, contorted accumulations forming massive layers to 20cm in width and pyrite nodules. Local pyrrhotite carries chalcopyrite up to 1% over 10cm. Sphalerite is minor and is mainly in the "coarser" tuffaceous sections. 15.8-17.5-tuffaceous section with py/po to 10%, sphalerite to <1% 17.5-18.3-argillite with py, po to 25%, chalcopyrite <1% 18.3-19.2-tuffaceous section 5-8% py as disseminated grains to <1mm. 19.2-23.4-argillite, minor tuff sections with pyrite to	1695 1696 1697	15.8 17.5 18.4	17.5 18.4 19.2	1.7 0.9 0.8	710 739 223	3280 621 573	31 47 3	2.0 2.3 0.2	36 86 10
		40%, pyrrhotite local to 10%, chalcopyrite with pyrrhotite, locally 1% over 10cm, minor sphalerite. Lower contact is quartz carbonate vein.	1698 1699	19.2 21.3	21.3 23.4	2.1	788 670	1950 528	48 70	1.8 1.9	202 168
		23.4-24.6-tuffaceous section with 30cm argillite layer. Pyrite to 15%, as dissemination, small veinlets and massive veinlets in argillite to 5mm.	1700	23.4	24.6	1.2	501	607	4	0.5	24

							Assays	S			
From	То	Description	Sample #	From	То	Length (meter)	Cu ppm	Zn ppm	Pb ppm	Ag g/ton	Au ppb
		Layering is at 34° to core axis.			_	()	PPIII	PPIII	ррт	g/to/1	ppo
24.6	29.1	Foliated Sericite Tuff -fine to medium grained, pale green to grey, foliated sericitic tuff, hosting pyrite as disseminations, minor massive veinlets and pyrrhotite as elongated nodules. Sericite is moderate to strong with 40cm section of very strong sericitization. Foliation at 38° to core axis. Unit contains small dark grey to black quartz eyes, abundant in upper 2m.	1701 1702 1703	24.6 26.0 27.6	26.0 27.6 29.1	1.4 1.6 1.5	311 42 60	30 49 37	7 1 1	0.4 0.1 0.1	10 5 60
29.1	37.9	Tuff -fine grained, medium to dark green weakly foliated mafic tuff, soft, chloritic, calcitic as grains to small veinlets. The unit contains mainly pyrrhotite as disseminations, elongated nodules and small veinlets to 0.5mm. Chalcopyrite is minor, sphalerite nil.	1704 1705	29.1 31.1	31.1 33.0	2.0 1.9	176 132	100 118	1 1	0.2 0.2	9
37.9	45.2	Mafic Volcanic -fine to medium grained, medium to dark green, fracture controlled carbonate to 5cm. Minor quartz veining. Unit is massive, minor chlorite filled fractures.									
45.2	53.2	Mafic Volcanic -fine to medium grained, medium to dark green, possibly pillowed with pyrrhotite veining in selvages, with minor chalcopyrite. Pyrite occurs throughout the unit as cubes up to 0.8cm and minor clusters of cubes.									
53.2	85.3	Mafic Volcanic -medium grained, dark to medium green, chloritic, possibly pillowed, flow structures locally but unit is fairly massive in appearance. Unit is variably magnetic and contains pyrite cubes as above but cubes are generally smaller <2mm in size. Chalcopyrite occurs as small random veinlets, fracture fillings. Unit has abundant white flecks to 10-15% of unit possible leucoxene. Fined grained chloritic sections occur randomly may be indicative of pillow edges?									

Hole # EM99-2

	T +	I.S	Assays									
From	То	Description	Sample #	From	То	Length (meter)	Cu ppm	Zn	Pb	Ag	Au	
		Grains of magnetic small <1mm occur through the unit. Unit has dark green probably chlorite spots. 66.0-74.0-abundant calcite and/or quartz veins to 2cm in width random orientations.				(meter)	рри	ppm	ppm	g/ton	ppb	
85.3	90.8	Felsic Porphyry -fine to medium grained light to medium grey to sericitic green grey, medium hard to hard. Feldspar phenocrysts are saussuritized, yellow green, sericite is weak to moderate foliation related to locally pervasive. Minor quartz veining to silica rich sections <2cm in width. Upper contact contorted lower at 38° to core axis. Minor sulfides in mafic side of contact.										
90.8	132.3	Mafic Volcanic -medium grained, dark green as above. Pyrite in this section is trace as cubes, very random. Unit strongly magnetic local, moderately magnetic continuously. Unit is locally coarser grained in appearance due to carbonate grains in the matrix. Calcite and/or quartz veining is random as veins <5cm 60/90° to core axis. Unit is solid only minor fracturing at 60/30° to core axis. 118.0-119.0-slight increase in quartz veining as veins to 10cm.										
132.3	137.4	Porphyry -fine grained, light to medium grey to grey green, weakly to moderately sericitized. Unit has minor sulfides of pyrite. Fractures display potassic alteration for up to 0.4cm and locally alteration is pervasive. Upper and lower contact areas <1.0m are darker grey, possibly chilled. Quartz eyes are small medium to dark grey, feldspars most evident in upper and lower contact zones as white, 2mm phenocrysts. 136.3-136.7-alteration zone of silica, feldspathization 10cm white quartz vein and possible tourmaline in fracture in quartz. Section is beige coloured as potassic alteration.										

F							Assa	ys			
From	То	Description	Sample #	From	То	Length (meter)	Cu ppm	Zn	Pb	Ag	Au
137.4	148.2	Mafic Volcanic -fine to coarse grained, dark green to blackish mafic flow with carbonate in matrix. Pyrite as small cubes as above, locally to 5%. Chlorite occurs as "veins" and clots. Quartz/carbonate veining as small veins <2cm, random orientations, dominant at 70° to core axis.				(meter)	ррш	ppm	ppm	g/ton	ppb
148.2	155.1	Porphyry -fine to medium grained, light to medium grey, weakly foliated at 47° to core axis, quartz eye porphyry. Quartz eyes are darkish grey to 1mm, occasional 2mm quartz eyes, porphyroblastic, rounded. Feldspar less evident, minor. Pyrite is minor to <1% as disseminations and one "veined" section at 151.0. Quartz is minor, potassic alteration minor concentrated near fractures.									
155.1	194.7	Mafic Volcanic -fine to medium grained, locally coarser especially towards end of section. This section contains disseminated and cube pyrite as above. Quartz and carbonate veining is slightly increased in this section as white veins at 60/80° to core axis dominantly. Unit is magnetic weak to strong except in foliated section below. 170.0-176.6-foliated section with carbonate grains calcite on foliations at 53° to core axis. Pyrite slightly increased. 176.6-194.7-coarser grained section with olive green colouration appearing, probably saussuritization of feldspars may be micro gabbro. Quartz vein 190.7-191.1 white 60° to core axis. May have small tourmaline.									
	194.7	End of Hole									
		acid test 194.7 -63°						i			i

SUPERMSED: R Cathoun

REVISED:

DATE: 07/02/99

SCALE 1: 1000 (metres)

0 20 40 50 80 100

Project:

AUMO Denton Township

Date:

March 8-10, 1999

Logged by:

Robert Calhoun Drilling Co: Colbert Drilling



Claim Number: Patent # 17405

42A05SE2009

030

COLLAR LOCATION: L575E/012S

012S

575E

SURVEYS: Acid Test

TIMMINS COORDINATES GRID COORDINATES

DDH: EM99-3

Setup:

Depth 0.0 123.0m

Azimuth 150°

10

20

CJ

CON S -

Dip <u>-70°</u> -64°

2.20574

Northing:

Easting

Elevation: 0.0 meters TD: 123 meters

DRILLING DATES

Finished: March 10, 1999

Started: March 8, 1999

Project: AUMO Denton Township Date: March 8, 1999

Logged By: R. Calhoun

DDH: EM99-3

GEOLOGIC SUMMARY

FROM	TO	DESCRIPTION	INTERVAL	SIGNIFICANT ASSAY AVERAGES

(m)	(m)		From	То	Width	Cu	Zn	Pb	Ag	Au
			(m)	(m)	(m)	ppm	ppm	ppm	g/t	ppb
0.0	16.4	Overburden								
16.4	22.2	Felsic Volcanic - Porphyritic				1				
22.2	28.8	Felsic Volcanic		i		[1	
28.8	34.6	Mafic Volcanic]					
34.6	47.3	Mafic Volcanic					ļ			
47.3	51.8	Mafic Volcanic	į		ł					
51.8	57.8	Mafic Volcanic				<u> </u>				
57.8	69.6	Mafic Volcanic - Pillowed	[ĺ	İ			
69.6	73.4	Mafic Volcanic to Sediment								
73.4	78.0	Mafic Volcanic							ļ	
78.0	78.9	Mafic Volcanic				ł			•	
78.9	81.4	Felsic Tuff (Sediment)					j			
81.4	86.8	Felsic Tuff (Sediment)			j	1			l	
86.8	96.0	Mafic Volcanic		•						
96.0	101.8	Mafic Volcanic - Dacite						Ì		
101.8	115.3	Mafic Volcanic - Pillowed basalt					İ		Ì	
115.3	123.0	Mafic Volcanic - Flow Breccia			l					
123.0		End of Hole						1]	
					<u> </u>					
1					1]	l	1]	

_	~		-	_		TO
	1	nл	n.a	—	N	TS

Property: AUMO Denton Township

Hole Number: EM99-3

Claim Number: Patent #17405

Location: L575E/012S

Final Depth: 123.0 meters

Logged By: Robert Calhoun

Azimuth: Grid South 150°

Dates Drilled: March 8-10, 1999

Drilled By: Colbert Drilling

Dip: -70°

Dates Logged: March 10-11, 1999

Signature:

							Assay	5			
From	То	Description	Sample #	From	То	Length (meter)	Cu ppm	Zn ppm	Pb ppm	Ag g/ton	Au ppb
0	16.4	Overburden									ļ
16.4	22.2	Felsic Volcanic (?)-porphyritic -fine to medium grained, light to locally medium grey to grey green. Unit contains feldspar phenocrysts or crystals to 1mm. The phenocrysts or crystals appear to be in pseudo-layers. Maybe a crystal tuff. Lower contact is crushed.									
22.2	28.8	Felsic Volcanic -fine grained generally, medium to dark grey, medium hard to weakly siliceous. Unit has a variable texture from tuffaceous layered to massive with large (to 0.5cm) nodules pale green to epidote colour probable saussuritized feldspars. Sulfides are minor with one area of 3-5% py -23.2-23.4 and minor to 1% associated chalcopyrite as small grains to clusters. Pyrite is as fine discontinuous laminae. Lower contact -55° to core axis.									
28.8	34.6	Mafic Volcanic -fine to medium grained, medium to dark green matrix but the colour is predominantly whitish due to feldspathization and weak silicification. The unit has a chaotic appearance. Dark green chloritic nodules and spots occur throughout the section. Lower contact 47° to core axis.									

	,						Assa	ys			
From	То	Description	Sample #	From	То	Length (meter)	Cu ppm	Zn ppm	Pb ppm	Ag g/ton	Au ppb
34.6	47.3	Mafic Volcanic -fine grained, medium to dark green massive to weakly foliated. Upper section is massive to (to 41m) giving way to a more tuffaceous appearing section with weak silicified section. Sulfides occur in this lower section. Pyrite as large cubes and minor laminae and pyrrhotite as fine laminae generally. Minor chalcopyrite occurs with the pyrrhotite, as at 45.1m, in small clusters. Minor sphalerite as individual reddish grains.				(motor)	ppm	ppiii	ррт	g/ton	рро
47.3	51.8	Mafic Volcanic -feldspathic altered as above 28.8-34.6m.								<u> </u> 	
51.8	57.8	Mafic Volcanic -fine grained, medium to dark green, massive generally featureless with minor sulfides of pyrite as clusters to veinlets of medium cubes and minor pyrrhotite on fractures with minor chalcopyrite as at 57.7.									
57.8	69.6	Mafic Volcanic-pillowed -fine grained, medium to dark green matrix altered to apple green and white due to variable, selective feldspathization. This section gives the impression of being pillowed with selvages marked as dark green chloritic patches. The feldspathization has selectively altered pillow fragments and pillow interiors giving a chaotic alteration pattern. Sulfides of pyrite occur in "zones" of pyrite cubes generally and minor laminae.									
69.6	73.4	Mafic Volcanic to sediment -fine grained, dark green, siliceous with local patches of silica/feldspar white to greyish. Unit is possibly a fine ash sediment. 10-25% of the unit is massive magnetite locally as fine grained layering. Pyrrhotite and associated chalcopyrite occur as nodule clusters to disrupted veins. Chalco is minor. Lower contact area 72.6-73.4 becomes weakly bleached and contains no magnetite but contains small grains of probable sphalerite and limonite. Magnetite section is conductive.	1733 1734 1735 1718	69.6 70.6 71.6 72.6	70.6 71.6 72.6 73.6	1 1 1 1	512 69 67 198	49 75 138 3430	1 1 1 1	0.5 0.1 0.2 0.4	27 14 31 45

			Assays										
From	То	Description	Sample #	From	То	Length (meter)	Cu ppm	Zn ppm	Pb ppm	Ag g/ton	Au		
73.4	78.0	Mafic Volcanic -fine to medium grained, medium green, granular in appearance locally. Massive with calcite filled fractures at 60° and 30° to core axis. Section may be Dacite.				(motor)	ppiii	ppiii	ppiii	griori	рро		
78.0	78.9	Mafic Volcanic -magnetite as above 57.8-69.6m											
78.9	81.4	Felsic Tuff (Sediment) -fine to medium grained, light to medium grey green, sericitic, may contain fragments. The unit contains cherty exhalite in discontinuous layers and as broken layers - pale grey. Also silica/feldspar sections, white generally broken. The unit is layered and variably bleached on the layering. Sulfides of pyrrhotite dominant and pyrite occur randomly through the section <1% as local concentrations. Foliation 42° to core axis.	1719	79.9	81.4	1.5	54	258	1	0.1	nil		
81.4	84.1	Graphitic Argillite -fine grained black graphitic argillite hosting 10-15% mainly pyrite as laminae and nodules to 2cm. The section is silicified making the argillite hard to scratch. 81.4-82.0 (0.6)-cherty exhalite layer with 15% pyrrhotite/pyrite, chert layering and grey quartz veins.	1720	81.4	82.0	0.6	485	1170	1	0.8	3		
81.4	86.8	Felsic Tuff (sediment) -fine to medium grained, pale to medium green grey, sericitic. Unit has a granular appearance, foliated. Pyrite pyrrhotite occur as fine dissemination and local veinlets to 0.5cm in width. Some limonite staining on fractures. Foliation 60° to core axis.	1721 1722 1723 1724	82.0 83.0 84.1 85.6	83.0 84.1 85.6 86.8	1.0 1.1 1.5 1.2	444 241 74 31	3800 64 169 17	50 47 1 1	1.6 1.1 0.1 0.1	75 93 3 2		
86.8	96.0	Mafic Volcanic -fine grained to medium grained, medium to dark green. The upper contact area appears as a mafic tuff? dark green, granular in appearance with amygdules to 3mm rounded of calcite carbonate. The centre of the unit is more massive with blades and minor rounded white flecks may be dolomitic											

F .			Assays										
From	То	Description	Sample #	From	То	Length (meter)	Cu ppm	Zn ppm	Pb ppm	Ag g/ton	Au ppb		
		carbonate. The end of the section contains lenticular (may be stretched amygdules) chlorite to 0.5cm by 0.2cm wide. Some bleaching has occurred in this section also. Sulfide content is low within section having large pyrite cubes and irregular patches of pyrrhotite, minor chalcopyrite - 94.2-94.5m. Sections are- 86.8-88.1m - tuff 88.1-94.5m- massive 94.5-96.0m - chlorite nodules (amygdules)								grton	pps		
96.0	101.8	Mafic Volcanic- Dacite -fine to medium grained, light to medium grey green, with minor quartz/carbonate fracture fillings. Sulfides are minor as pyrite cubes and minor disseminations. Pyrrhotite is in the end of the section 101.2-101.8m.											
101.8	115.3	Mafic Volcanic- Pillowed Basalt -fine grained, medium to dark green, chloritic with chlorite spots amygdules abundant locally. Pillow selvages are marked by dark green chlorite and pyrrhotite concentrations. The texture of the unit is variable from foliated to massive. Lower section of unit 113.2-115.3m contains 10% pyrrhotite and minor chalcopyrite. Local bleaching increases in this section with some feldspar porphyry band at 114.8-115.0m.	1725 1726	113.1 114.1	114.1 115.3	1.0	510 240	50 46	1 1	0.2 0.1	2 5		
115.3	123.0	Mafic Volcanic- Flow Breccia -fine grained, dark green matrix hosting variably bleached fragments, dark green fragments to 5cm in size, pillow breccia?. Sulfides are nil. This section also contains feldspathic nodules to 1cm, and swirts. These are white to greenish in colour. The swirts appear to rap around fragments. The end of the section 122.2-123.0 may be the start of another mafic unit but not enough core to tell. The fragments bleach to pale translucent green.											
	123.0	End of Hole Acid Test 123.0m -64°											

Project:

AUMO Denton Township

Date:

March 10-12, 1999

Logged by: Drilling Co:

Robert Calhoun Colbert Drilling



Claim Number: Patent # 11153

42A05SE2009 2.20574

040

COLLAR LOCATION: L090E/275S

SURVEYS: Acid Test

TIMMINS COORDINATES

DDH: EM99-4

GRID COORDINATES

275S

090E

Setup:

Depth 0.0m 93.0m Azimuth 120°

Dip <u>-45°</u>

-39°

Northing:

Easting

Elevation: 0.0 meters TD: 93.0 meters

DRILLING DATES

Started: March 10, 1999 Finished: March 12, 1999

V

12

Project: AUMO Denton Township Date: March 10, 1999

Logged By: R. Calhoun

DDH: EM99-4

GEOLOGIC SUMMARY

FROM TO	DESCRIPTION	INTERVAL	SIGNIFICANT ASSAY AVERAGES

(m)	(m)		From	To	Width	Cu	Zn	Pb	Ag	Au
` ,	` ,		(m)	(m)	(m)	ppm	ppm	ppm	g/t	ppb
0.0	5.0	Overburden								_
5.0	20.4	Mafic Volcanic			1					
20.4	29.9	Mafic Volcanic			1					
29.9	34.6	Mafic Volcanic								
34.6	37.8	Mafic Volcanic/Silica/Magnetite								
37.8	41.3	Dacitic Volcanics			ļ					
41.3	43.9	Tuff/Sediments	1 1		1					
43.9	45.5	Dacitic Flow								
45.5	46.9	Graphitic Argillite/Tuff								
46.9	50.95	Tuff								
50,95	56.2	Mafic to Intermediate Volcanic								
56.2	57,1	Tuff								
57.1	58.0	Graphitic Argillite/Sulfides	i l			}	Ì			
58.0	75.4	Intermediate Volcanics								
75.4	82.5	Feldspar Porphyry								
82.5	89.0	Intermediate Volcanic	l l		ļ		ļ			
89.0	93.0	Porphyry			Ì				ł	
93.0		End of Hole			1				-	
ı					1				1	

_	\boldsymbol{n}	B 4	П.	Æ	M 1	•	·C
	.,	W	I 18	/1 6	ıv		

Property: AUMO Denton Township

Hole Number: EM99-4

Claim Number: Patent # 11153

Location: L090E/275S

Final Depth: 93.0 meters

Logged By: Robert Calhoun

Azimuth: 120°

Dates Drilled: March 10-12, 1999

Drilled By: Colbert Drilling

Dip: <u>-45°</u>

Dates Logged: March 10-13, 1999

Signature:

							Assays	5			
From	То	Description	Sample #	From	То	Length (meter)	Cu ppm	Zn ppm	Pb ppm	Ag g/ton	Au ppb
0	5.0	Overburden									
5.0	20.4	Mafic Volcanic -fine to locally medium grained, medium to dark green, chloritic, green, possibly pillowed mafic volcanic. Bleached, altered patches are frequent light grey green. Sulfides of pyrite/pyrrhotite are minor to very locally 1 to 2%. Unit becomes weakly foliated towards the end of section, 53° to core axis. Unit is generally weakly siliceous to moderately siliceous over 1-2 meters. Carbonate veining/nodules, 5% 16.6-18.0 -fine to medium grained, light green grey felsic volcanic, 1-3% pyrite, pyrrhotite									
20.4	29.9	Mafic Volcanic -fine to medium grained, medium to dark green, chloritic, massive in appearance with only minor fractures and minor carbonate veining. Basalt Fe tholeiitic.									
29.9	34.6	Mafic Volcanic -medium grained, dark green probably pillow Fe tholeiitic basalt. The selvages in this section are marked by increased chlorite -dark green and by the presence of pyrrhotite, minor pyrite and magnetite. Minor chalcopyrite blebs occur with some pyrrhotite sections.	1727 1728	32.0 33.6	33.0 34.6	1.0	320 91	69 77	1 1	0.2 0.1	3 nil
34.6	37.8	Mafic Tuff/ Silica/Magnetite -fine grained, dark green mafic tuff/sediment layered with magnetite in layers up to 3cm at 66° to core axis. Silica									

	Assays From To Description Sample From To Length Cu Zn Ph Ag										
From	То	Description	Sample #	From	То	Length (meter)	Cu ppm	Zn ppm	Pb ppm	Ag g/ton	Au ppb
		is as white to greyish quartz veins and whitish chert layers. Pyrrhotite is the most abundant sulfide in this section and pyrite forms as cubes and minor laminae. Minor chalcopyrite as grains and small clusters. 36.6-37.2 -felsic tuff-1-5% po/py	1729 1730 1731 1732	34.6 35.6 36.6 37.2	35.6 36.6 37.2 37.8	1.0 1.0 0.6 0.6	143 144 13 152	85 84 41 45	1 1 1 1	0.1 0.1 0.1 0.2	7 2 12 14
37.8	41.3	Dacitic Volcanics -medium grained, light to medium green grey, massive nearly featureless volcanic. Sulfides are nil to minor. Lower contact 71° to core axis.									
41.3	43.9	Tuff/Sediment -fine grained, light to medium grey to dark green chloritic. The beginning and end of the section is felsic tuff, laminated with pyrrhotite/pyrite and minor chalcopyrite. Brownish staining suggests the section contains fine sphalerite. (41.3-42.2; 43.2-43.9) Laminations 67° to core axis. 42.2-43.2 -dark green, fine grained, chloritic tuff. This section contains bands of massive magnetite to 3cm wide and pyrrhotite. Chalcopyrite is minor.	1736 1737 1738	41.3 42.2 43.2	42.2 43.2 43.9	0.9 1.0 0.7	208 153 953	453 210 4540	1 1 2	0.3 0.2 1.5	7 38 22
43.9	45.5	Dacitic Flow (?) -fine grained, light grey, massive flow with minor carbonate veining. The unit contacts are 70° to core axis.									
45.5	46.9	Graphitic Argillite/ Tuff -fine grained, dark grey to black graphitic argillite with 40cm of dark grey tuff at upper contact. The section contains pyrrhotite and pyrite totaling 8-15% locally as fine laminae, discontinuous veinlets and disseminations. Sphalerite occurs as disseminated grains, fine laminae and clusters of grains, 1-2% sphalerite. Chalcopyrite occurs as grains or clusters with some pyrrhotite <1%.	1739	45.5	46.9	1.4	1090	8960	16	2.4	29
46.9	50.95	Tuff -fine grained, light to medium grey green, sericitic, foliated tuff hosting pyrrhotite 3-5%, pyrite 1-3% and variable chalcopyrite and sphalerite. Foliations 70° to core axis. 46.9-47.4 -25-30% pyrrhotite, pyrite 3-5%,									

							Assa	ys			
From	То	Description	Sample #	From	То	Length (meter)	Cu ppm	Zn ppm	Pb ppm	Ag g/ton	Au ppb
		sphalerite as large blobs to clusters 3-5%, chalcopyrite 1-2% as veins and large blobs/clusters section has	1740	46.9	47.4	0.5	1230	7160	1	1.3	21
		chert veining and quartz veins medium grey. 47.4-50.2 -tuff with laminae of pyrrhotite pyrite, minor chalcopyrite, nil to trace sphalerite49.8-50.2 -feldspar porphyry-medium grey,	1741 1742	47.4 48.7	48.7 50.2	1.5 1.5	115 297	109 4 20	2 25	0.2 0.7	5 151
		fine grained, with white feldspar phenocrysts to 4mm. 50.2-50.95 -fine grained dark green chloritic with magnetite veins and pyrrhotite/pyrite as massive vein 6cm and mixed vein massive pyrrhotite with large pyrite nodules.	1743	50.2	50.95	0.75	422	97	1	0.4	38
50.95	56.2	Mafic to intermediate Volcanic -fine grained, light to medium grey green, massive to weakly foliated. Carbonate veining as small veinlets, locally associated with white quartz veins to 2cm wide. Sulfide mineralization is nil to trace.									
56.2	57.1	Tuff -fine grained, light to medium grey green sericitic tuff hosting 20% pyrrhotite/pyrite with chalcopyrite <1% as grains to small clusters. One quartz vein 56.45-56.8-white to greyish with 2- 5% pyrrhotite pyrite.	1744	56.2	57.1	0.9	245	173	4	0.7	14
57.1	58.0	Graphitic Argillite/Sulfides -fine grained, black graphitic argillite with 10-15% pyrrhotite/pyrite with minor sphalerite/chalcopyrite. Section begins with 10cm massive pyrrhotite pyrite vein.	1745	57.1	58.0	0.9	254	976	40	1.8	147
58.0	75.4	Intermediate Volcanics -fine grained, light to locally medium grey green, varies from thinly laminated to generally massive. Laminations/foliations are in sericitized sections, with pale green sericite. Sulfides are mainly restricted to these sections. Pyrrhotite to pyrite 1-3% with local <10cm semi-massive sections. Upper part of the unit contains dark grey to black spots which are chlorite, minor quartz eyes and weakly stretched on the foliation 74° to core axis. Sulfide sections are 65.6-66.6; 70.7-71.4	1746 1747	65.6 70.7	66.6 71.4	1.0 0.7	144 215	36 114	1 103	0.4 0.3	14 192
75.4	82.5	Feldspar Porphyry									

From To Description Sample From To Lar								ys			
rom	То	Description	Sample	From	То	Length	Cu	Zn	Pb	Ag	Au
			#			(meter)	ppm	ppm	ppm	g/ton	ppb
		-fine grained, medium grey weakly sericitic matrix with	1771	75.4	76.9	1.5	-	-	-	-	3
		up to 60% white sub angular feldspar phenocrysts to	1772	76.9	78.0	1.1	_	_	-	-	39
		4mm. The feldspars occasionally have dark centres or	1773	78.0	79.6	0.6	_	_	_	_	2
1		are greenish in colour (saussauritized). Upper contact	1748	79.6	80.6	1.0	94	115	310	7.4	30
-		55° to core axis.	17-10	, 0.0	00.0	'.	•			,.,	"
1			1774	80.6	81.6	1.0	•	_		-	12
ļ		One section at 80m contains pyrite as large grains				0.9		_	_	_	10
		with minor blades of arsenopyrite in a sheared section of the porphyry.	1775	81.6	82.5	0.9	-	-	-	-	10
82.5	89.0	Intermediate Volcanic -as above		į							
89.0	93.0	Porphyry	1776	89.0	90.0	1.0	-	-	-	-	9
		-as above; phenocrysts are <50% less saussauritized phenocryst's.	1777 1778	90.0 91.5	91.5 93.0	1.5 1.5	-	-	-	-	5 ni
	93.0	End Of Hole									
		Acid Test									
		93.0m -39°									
					1				}		1
					İ						
					į						
					i						
		·			ļ			ļ ļ			
								}		ļ !	
										-	
			1	1	1	1				1	

TRACED:

REVISED:

DRAWN: del DRAFTING

SUPERVISED: R Calhoun

DATE:

DATE:

DATE: 27/04/99

DATE: 23/04/99

NTS: 42-A/05

SCALE 1: 1000 (metres)

0 20 40

MAP No:

PROJECT: AUMO

FILE: EM9904SN

60

Project:

AUMO Denton Township

Date:

Setup:

March 21-24, 1999

Logged by: Drilling Co:

Robert Calhoun Colbert Drilling

Claim Number: Patent # 11153

42A05SE2009 2.20574

DENTON

DDH: EM99-5

COLLAR LOCATION: L065E/300S

GRID COORDINATES

300S

065E

SURVEYS: Acid Test

Depth

0.0

99.0

Azimuth 120°

Dip <u>-70°</u>

<u>-65°</u>

TIMMINS COORDINATES

Northing: Easting

Elevation: 0.0 meters TD: 99.0 meters

050

DRILLING DATES

Started: March 21, 1999 Finished: March 24, 1999

Project: AUMO Denton Township Date: March 21, 1999

Logged By: R. Calhoun

DDH: EM99-5

GEOLOGIC SUMMARY

FROM	TO	DESCRIPTION	INTERVAL	SIGNIFICANT ASSAY AVERAGES

(m)	(m)		From	To	Width	Cu	Zn	Pb	Ag	Au
			(m)	(m)	(m)	ppm	ppm	ppm	g/t	ppb
0.0	5.4	Overburden				į				
5.4	10.3	Mafic Volcanic								
10.3	13.4	Quartz Vein								
13.4	17.2	Mafic Volcanic						!		
17.2	31.8	Mafic Volcanic					į			
31.8	40.3	Intermediate to Felsic Volcanic								
40.3	41.9	Chloritic Magnetite Tuff						1		
41.9	50.4	Intermediate to Mafic (Dacitic)					Į		1	
		Volcanic							l	
50.4	51.3	Chloritic Silica Rich Tuff		-						
51.3	53.4	Cherty Fragmental								
53.4	55.0	Cherty Fragmental to Tuff/Sulfides					ŀ		ĺ	
55.0	60.4	Mafic to Intermediate volcanic					1			
60.4	62.3	Foliated Intermediate Volcanic							1	
62.3	68.4	Intermediate Volcanic	1					ł		
68.4	70.9	Laminated Tuff/Sulfides				İ				
70.9	75.8	Intermediate Tuff		•						
75.8	83.1	Feldspar Porphyry/Tuff								
83.1	92.1	Intermediate to Felsic Volcanic					}		1	
92.1	96.1	Felsic Volcanic	ŀ		1		1			ł
96.1	99.0	Mafic Volcanic								
99.0		End of Hole				1		1		

Property: <u>AUMO Denton Township</u>

Hole Number: EM99-5

Claim Number: Patent # 11153

Location: L065E/300S

Final Depth: 99.0 meters

Logged By: Robert Calhoun

Azimuth: 120°

Dates Drilled: March 21-24, 1999

Drilled By: Colbert Drilling

Signature

Dip: <u>-70°</u>

Dates Logged: March 21-25, 1999

							Assay	5			
From	То	Description	Sample #	From	То	Length (meter)	Cu ppm	Zn ppm	Pb ppm	Ag g/ton	Au ppt
0	5.4	Overburden									
5.4	10.3	Mafic Volcanic -fine grained, medium to dark green chloritic, soft, calcitic volcanic. The unit is highly crushed locally to broken. This section contains calcite in the matrix and as small veinlets. Quartz veins are up to 50cm in width (1) and generally are less than 15cm. The veins occur in crushed sections but the trend appears to be 25° to core axis. The quartz is white to greyish with chlorite on fractures. Limonite staining is common in the unit. (Some lost core)	1749 1750	6.4 7.9	6.9 8.5	0.5 0.6	<u>.</u>	-	-	- -	2 nil
10.3	13.4	Cuartz vein -this vein is white to greyish with colouration probably due to chlorite/tourmaline and possible molybdenum (?). The upper and lower contacts are crushed to broken so a trend angle can not be determined. Muscovite occurs locally in fractures yellow to clear. The vein is locally very vuggy with limonite remaining (sulfides). Black to brown tourmaline occurs as patches. Sulfides are minor but vugged areas are assumed to have been sulfides locally. Minor calcite occurs in some fractures. 10.3-12.0-generally white quartz with limonite stained fractures and inclusions of mafic material; fairly solid vein. 12.0-13.4 -tourmaline section, multiple vugged areas, fairly solid with muscovite and dark grey discolouration	1751 1752 1753 1754	10.3 10.9 12.0 12.7	10.9 12.0 12.7 13.4	0.6 1.1 0.7 0.7	-	-	-	-	2 3 nil nil

							Assa	ys			
From	То	Description	Sample #	From	То	Length (meter)	Cu ppm	Zn ppm	Pb ppm	Ag g/ton	Au ppb
		(molybdenite??)									
13.4	17.2	Mafic Volcanic -fine to medium grained, dark green, soft with abundant fracturing local crushing. Quartz veining is minor as 1- 2cm veins 80° and 60° to core axis. Limonite staining is common.									
17.2	31.8	Mafic Volcanic -fine grained, medium to dark green, soft to moderately hard. Carbonated (calcite) matrix is common and calcite also occurs as small veinlets 3mm to <1cm occasionally associated with white quartz (minor component). Calcite can occur as nodules which appear elongated on the foliation, probably amygdules. The foliation is at 29° to core axis as is the lower contact. Sulfides are nil to trace. Except for one veined area at 26m which has pyrite cubes in a carbonate vein (1cm)									
31.8	40.3	Intermediate to Felsic Volcanic -fine to medium grained, medium grey to grey green foliated to laminated tuff. This section has variable texture including layers of porphyritic tuff with white feldspars sub-angular to sub rounded. The foliation is at 38° to core axis. Pyrrhotite ± chalcopyrite occurs as laminae on the foliation especially from 37.0 to 37.9m and at the lower contact 39.4 -40.3m.	1755 1756 1757 1758	36.0 37.0 37.9 39.4	37.0 37.9 39.4 40.3	1.0 0.9 1.5 0.9	51 894 71 250	54 84 55 65	1 1 1 1	0.1 1.3 0.1 0.2	nil nil nil nil
40.3	41.9	Chloritic Magnetite Tuff -fine grained dark green chloritized "mafic" tuff hosting magnetite layers <1cm and disseminations clusters and veinlets of pyrrhotite. Layering in this section is at 39° to core axis.	1759	40.3	41.9	1.6	152	94	1	0.1	9
41.9	50.4	Intermediate to Mafic (Dacitic) Volcanic -fine to medium grained, light to medium green grey carbonated (calcite) volcanic generally featureless to foliated over <1m sections. Calcite becomes more abundant as distinct veins downhole with veins reaching 2cm in size commonly associated with white									

							Assa	ys	•		
From	То	Description	Sample #	From	То	Length (meter)	Cu ppm	Zn ppm	Pb ppm	Ag g/ton	Au ppb
		quartz veins to 5-8cm. Lower contact and foliations are at 34° to core axis. Sulfides are minor.									
50.4	51.3	Chloritic Silica Rich Tuff -fine grained, dark green chloritic tuff hosting magnetite pyrrhotite and minor chalcopyrite. The section also contains variably altered "fragments" of cherty material. Pyrrhotite occurs as disseminations and veinlets especially at lower contact.	1760	50.4	51.3	0.9	254	132	1	0.1	nil
51.3	53.4	Cherty Fragmental (Tuff) -fine grained, light green sericitic matrix supporting fragments of cherty tuff/chert. The fragments are up to 4cm long and 1cm wide angular. Sulfides are nil to trace.	1761 1762	51.3 52.3	52.3 53.4	1.0 1.1	22 71	69 54	1 1	0.1 0.1	2 nil
53.4	55.0	Cherty Fragmental to Tuff/Sulfides -fine grained, medium to dark green grey tuffaceous matrix with cherty fragments. This section has chlorite and 15-25% pyrrhotite with blebs and splashes of chalcopyrite. Chalcopyrite <1%.	1763 1764	53.4 54.1	54.1 55.0	0.7 0.9	405 360	183 258	1 1	0.2 0.4	122 33
55.0	60.4	Mafic to Intermediate Volcanic -fine to medium grained, light to medium green to green grey, locally chloritic. Upper contact area foliated 37° to core axis. Small calcite veinlets, minor quartz. Sulfides are nil to trace.									
60.4	62.3	Foliated Intermediate Volcanic -fine grained, light (pale) green to light grey laminations. The unit is thinly laminated to moderately laminated. Sulfides of pyrrhotite as veinlets to disseminations and pyrite as laminae and 4mm cubes occur throughout the unit. Chalcopyrite and sphalerite are minor.	1765 1766	60.4 61.3	61.3 62.3	0.9	142 466	76 246	1 31	0.1 1.7	5 36
62.3	68.4	Intermediate Volcanic -fine grained to locally medium grained, light to medium green becoming increasingly grey green down unit. The unit is spotted with probable chlorite spots weakly elongated on foliation trend.									

							Assa	/\$			
From	То	Description	Sample #	From	То	Length (meter)	Cu ppm	Zn ppm	Pb ppm_	Ag g/ton	Au ppb
		One veined area 65.70 to 65.85 (15cm) contains pyrite grained to small cubes in a calcite/quartz vein. Black tourmaline is also present in abundance. Pyrrhotite pyrite can also occur in blebs or clusters minor.									
68.4	70.9	Laminated Tuff/Sulfides -fine grained, light green to dark chloritic green laminations with 20% pyrrhotite overall, with semi- massive to massive veins up to 30cm wide. Chalcopyrite <1% occurs throughout while sphalerite minor grains occur in a quartz vein at 69.1-69.4m.	1767 1768 1769 1770	68.4 68.9 69.4 70.2	68.9 69.4 70.2 70.9	0.5 0.5 0.8 0.7	187 358 150 559	70 43 100 330	1 1 1 45	0.4 0.9 0.5 2.1	nil 31 10 nil
70.9	75.8	Intermediate Tuff -fine grained to medium grained in areas of porphyritic tuff. This section has sericite increasing down section to making the core translucent at 75.0-75.8m. Sulfides are minor to trace.									
75.8	83.1	Feldspar Porphyry/Tuff -fine to medium grained, medium grey matrix hosting white to pale greenish feldspars to 4mm sub-rounded to angular. The porphyry alternates with fine to medium grained tuff forming generally sharp contacts at 46° to core axis. Sulfides are minor as fine disseminations of pyrite.	1779 1780 1781 1782 1783	76.97 78.0 79.5 81.0 82.0	78.0 79.5 81.0 82.0 83.1	1.1 1.5 1.5 1.0 1.1	- - - -			- - - -	nil 3 5 3 2
83.1	92.1	Intermediate to Felsic Volcanic -fine to locally medium grained, variable colouration from light green to dark green, with layers of pale beige to grey. The unit contains generally minor sulfides of pyrrhotite, pyrite as disseminations. The pyrite locally is as 5mm cubes. Chalcopyrite was noted with one cluster of pyrrhotite. 84.6-85.8 -sericitic tuff section with pale green, beige layering, 1-3%. Sulfides as pyrrhotite clusters and pyrite cubes.	1784 1785	83.1 84.6	84.6 85.8	1.5 1.2	60 102	61 18	1 1	0.1 0.1	nil 7

Hole # <u>EM99-5</u>

							Assa	ys			
From	То	Description	Sample #	From	То	Length (meter)	Cu ppm	Zn ppm	Pb ppm	Ag g/ton	Au ppb
92.1	96.1	Felsic Volcanic -medium grained, grey green, sericitic with silica feldspars matrix minor. Sulfides of pyrite, disseminations and minor pyrrhotite clusters. The unit is weakly foliated with sericite in the foliation.	1786 1787 1788	92.1 93.5 95.0	93.5 95.0 96.1	1.4 1.5 1.1	52 54 68	16 15 11	1 1 1	0.3 0.2 0.2	27 29 39
96.1	99.0	Mafic Volcanic -fine grained, dark green, calcitic matrix with small veinlets of calcite with quartz. Unit has dark chloritic spots (vesicles). Sulfides are nil to trace. Contact area is foliated to 96.8 at 55°									
	99.0	End Of Hole									
		Acid Test									
		99m -65°									

Az. 120° Patent 11153 EM99-05 065mE , 300mS Az. 120° , Dip --70° Overburden Mafic Volcanio Mafic Volcanic Chloritic Magnetite Tuff Intermediate/Mafic(Dacitic)Volcanic -Chloritic Silica rich Tuff Cherty Fragmental/Tuff Cherty Fragmental/Tuff/Sulphides
Mafic/Intermediate Volcanic Intermediate Valcanic Foliated Intermediate Volcania Laminated Tuff/Sulphides Intermediate Tuff Feldspar Porphyry/Tuff mediate/Felsic Volcanic Mafic Volcanic -100 -100 1232448 Ontario Inc. Exploration Timmins, ONTARIO AUMO PROPERTY DENTON TOWNSHIP SECTION 065 E -200 DDH EM99-05 Assay Cu, Zn ppm TRACED: NTS: 42-A/05 PROJECT: AUMO

DRAWN: del DRAFTING

REVISED:

SUPERVISED: R Calhoun

DATE: 27/04/99

DATE: 23/04/99

MAP No:

SCALE 1: 1000 (metres)

0 20 40

FILE: EM9905SN

60 80 100



Declaration of Assessment Work Performed on Mining Land

Mining Act, Subsection 65(2) and 66(3), R.S.O. 1990

Transaction Number (office use) UX060. (X)353 Assessment Files Research Imaging

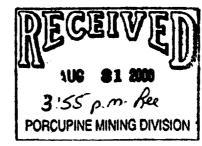
Per info sho			
ins	2.20574	DENTON	

'ions 65(2) and 66(3) of the Mining Act. Under section 8 of the Mining Act, thork and correspond with the mining land holder. Questions about this collection Mines, 3rd Floor, 933 Ramsey Lake Road, Sudbury, Ontario, P3E 685.

ling a claim, use form 0240.

INS 42A05SE2009 2.20574 DENTON	900 ling a claim,	use form 0240.
		o
1. Recorded holder(s) (Attach a list	نه (if necessary)	
Name		Client Number
Explorers Alli	isrel	30.3065
Address 168 ALGONAL	IIN FLUA GAST	Telephone Number
TIMELLES	CHARLE PURLLAGE	Fax Number
Name		Client Number
Address		Telephone Number
		Fax Number
	2	Carcondon
5 Tune of words market many	Denton /	CATS CAMON -
	(*) and report on only ONE of the follow	
Geotechnical: prospecting, surve assays and work under section 18		
Work Type		Office Use
D'amons De	Commodity	
		Total \$ Value of \$ 37427
Dates Work From 28 (2 /99) Performed Day Month Year	8 To 24 03 1999. Day Month Year	NTS Reference
	ship/Area Do-To~	Mining Division
More	G-Plan Number	Resident Geologist District
- complete and att - provide a map s	otice to surface rights holders before sta tach a Statement of Costs, form 0212; howing contiguous mining lands that are es of your technical report.	
3. Person or companies who prepare	red the technical report (Attach a list i	
Name () () () () ()	'	Telephone Number 7 0 5 - 2 6 7 - 3 5 / /
Adding 168 Albanguich		Fax Number 267-3121
Name	CASI TINALE	Telephone Number
statile .	DECEIVED	
Address	NECEIVED	Fax Number
	SEP 0 5 2000	Telephone Number
Address	GEOSCIENCE ASSESSMENT OFFICE	Fax Number
4. Certification by Recorded Holder I,	or Agent or Agent do hereby certify that I have ving caused the work to be performed or	personal knowledge of the facts set forth in witnessed the same during or after its
Signature of Recorded Holder or Agent	200	Date 80,2000
Agent's Address 16 & Alwanson'a fast	Telephone Numb	er Fax Number
0241 (03/97)		!
	りりょうにんぎ	NOTEN .

Deemed Nov. 29, 2000



mining la column t	Claim Number. Or if s done on other eligible and, show in this he location number d on the claim map.	Number of Claim Units, For other mining land, list hectares.	Value of work performed on this claim or other mining land.	Value of work applied to this claim.	Value of work assigned to other mining claims.	Bank. Value of to be distributed at a future date
eg	TB 7827	16 ha	\$26,825	N/A		
eg	1234567	12	0	\$24,000	\$24,000	\$2,825
eg	1234568	2	\$ 8,892	\$ 4,000	0	
00/00	P 11152	1	16569	44,000	0	\$4,892
60H05.	2 11153	1			3200	13 369
D497	1 17405 1074	9 ,	5739 15119			5739
•	1207545	8	13/17	70		15119
5				3200		
						
	Column Totals		2740-			
osection ere the v	Column Totals Li' L B L (Print Full Na 7 (1) of the Assessment Work was done. ecorded Holder or Agent Auth	nt Work Regulation (37427 , do here 6/96 for assignment	nt to contiguous c		3 4 22 7 s are eligible un ion to the claim
ere the value of R Instruction	Print Full Na 7 (1) of the Assessme work was done. ecorded Holder or Agent Auth ctions for cutting bac credits claimed in this deletion of credits: 1. Credits are to b 2. Credits are to b 3. Credits are to b	orized in Writing k credits that are n	ot approved. Cut back. Please Bank first, follower with the claims listed over all claims listed.	check (*) in the bed by option 2 or 3	e above work credits laims or for applicate a coo o o o o o o o o o o o o o o o o o	s are eligible un
Instruction of the follower of	Print Full Na 7 (1) of the Assessme work was done. ecorded Holder or Agent Auth ctions for cutting bac credits claimed in this deletion of credits: 1. Credits are to b 2. Credits are to b 3. Credits are to b	k credits that are needed are declaration may be e cut back from the e cut back starting we cut back as prioriti	, do here 6/96 for assignment Date ot approved. cut back. Please Bank first, follower it the claims listed on the attached.	check (*) in the back d by option 2 or 3 and in this declarationed appendix or as	e above work credits laims or for applicate a coo o o o o o o o o o o o o o o o o o	s are eligible un
Instruction of Received Instruction of the fitting the follower of Stamp	Print Full Na 7 (1) of the Assessme Work was done. ecorded Holder or Agent Authorities ctions for cutting bac credits claimed in this deletion of credits: 1. Credits are to b 2. Credits are to b 3. Credits are to b 4. Credits are to b	k credits that are needed are declaration may be e cut back from the e cut back starting we cut back as prioriti	, do here 6/96 for assignment Date ot approved. cut back. Please Bank first, follower it the claims listed on the attached.	check (*) in the back of appendix or as	e above work credits laims or for applicate a coo o o o o o o o o o o o o o o o o o	s are eligible un ion to the claim
Instruction of Received Instruction of the fitting the follower of Stamp	Print Full Na 7 (1) of the Assessme Work was done. ecorded Holder or Agent Authorities ctions for cutting bac credits claimed in this deletion of credits: 1. Credits are to b 2. Credits are to b 3. Credits are to b 4. Credits are to b ave not indicated how do by option number 2 in se Only	k credits that are needed are declaration may be e cut back from the e cut back starting we cut back as prioriti	, do here 6/96 for assignment Date ot approved. cut back. Please Bank first, follower with the claims listed over all claims listed ized on the attached	check (*) in the back for the continuous of the	e above work creditalisms or for applicate a coo o o o o o o o o o o o o o o o o o	s are eligible untion to the claim how you wish
Instruction of Received Instruction of the fitting the follower of Stamp	Print Full Na 7 (1) of the Assessme Work was done. ecorded Holder or Agent Authorities ctions for cutting bac credits claimed in this deletion of credits: 1. Credits are to b 2. Credits are to b 3. Credits are to b 4. Credits are to b ave not indicated how do by option number 2 in se Only	k credits that are needed are declaration may be e cut back from the e cut back starting we cut back as prioriti	ot approved. Cut back. Please Bank first, follower the claims listed on the attached be deleted, credits Deemed Approved.	check (*) in the back of appendix or as will be cut back from the coved Date	e above work credits laims or for applicate a coo c oxes below to show or 4 as indicated. ackwards; or on; or follows (describe): Date Notification Se Total Value of Cred	s are eligible untion to the claim how you wish
Instruction of Reserve of Reserve of the of the office the office Used Stamp	Print Full Na 7 (1) of the Assessme Work was done. ecorded Holder or Agent Authorities ctions for cutting bac credits claimed in this deletion of credits: 1. Credits are to b 2. Credits are to b 3. Credits are to b 4. Credits are to b ave not indicated how do by option number 2 i	k credits that are needed are declaration may be e cut back from the e cut back starting we cut back as prioriti	ot approved. Cut back. Please Bank first, follower of the claims lister of the attacher of the attacher of the attacher of the attacher of the approved of the approved for Residue of the approved of the a	check (*) in the back for the continuous of the	e above work credits laims or for applicate a coo c oxes below to show or 4 as indicated. ackwards; or on; or follows (describe): Date Notification Se Total Value of Cred	s are eligible untion to the claim how you wish
Instruction of Reserve of Reserve of the of the office the office Used Stamp	Print Full Na 7 (1) of the Assessme Work was done. ecorded Holder or Agent Authorities ctions for cutting bac credits claimed in this deletion of credits: 1. Credits are to b 2. Credits are to b 3. Credits are to b 4. Credits are to b ave not indicated how do by option number 2 i	k credits that are n declaration may be e cut back from the e cut back starting w e cut back as prioriti your credits are to b f necessary.	ot approved. Cut back. Please Bank first, follower of the claims lister of the attacher of the attacher of the attacher of the attacher of the approved of the approved for Residue of the approved of the a	check (*) in the back of appendix or as will be cut back from the coved Date	e above work credits laims or for applicate a coo c coxes below to show or 4 as indicated. ackwards; or on; or follows (describe): Date Notification Se Total Value of Credits corder (Signature)	s are eligible untion to the claim how you wish



Moustry of Northern Davelopmant and Mines

Statement of Costs for Assessment Credit

Personal information collected on this form is obtained under the authority of subsection 6(1) of the Assessment Work Regulation 6/36. Under section 8 of the Mining Act, the information is a public record. This information will be used to review the assessment work and correspond with the mining fland holder. Questions about this collection should be directed to the Chief Mining Recorder, Ministry of Northern Development and Mines, 6th Floor, 933 Ramsey Lake Road, Sudbury, Ontario, P3E 685.

Work Type	Units of Work Depending on the type of work, hat the number of hours/days worked, metres of drilling, kilometres of grid line, number of samples, etc.	Cost Per Unit of work	Total Cos
EM 98-1	255 me tres	034~	8670
EM 98-2	194 metres	@ 34~	6630
en 98-3	123 merres	@ 34~	4182
Em 98-4	93 merres,	3 ч ←	3/62
Em 98 -5	99 metres	@ 34~.	3366
600106155	150 MS	300/00	4500
Assays.	90 3 T	© 20. © 12	1800
ssociated Costs (e.g. supp	lies, mobilization and demobilization).		
	Floars.		560
	CASIVO +Shoes.		1701
Tra	nsportation Costs		
Foo	d and Lodging Costs		
		8543·	34999
	RECEIVED	GST.	2448
	SEP 0 5 2000 Total Value of A	Assessment Work	37438
	GEOSCIENCE ASSESSMENT		
Commission of the second of th	The state of the s	I was will too i millions	enter a servición de de servición de de servición de de servición de s
	MH111 WOAK × 0.50 ≈	Intar \$ 1000	not nome

- A recorded holder may be required to verify expenditures claimed in this statement of costs within 45 days request for verification and/or correction/clarification. If verification and/or correction/clarification is not made, the Minister may reject all or part of the assessment work submitted.

Certification verifying cost	6:		
Loud Balo	un fait, do hereby	certify, that the amounts s	hown are as accurate as mu;
(please print full na	nia) nd the costs were incurred t	while conducting assessmen	t work on the lands indicated .
		<i>4</i> _ ^	lam av'
1)(()	ECIETAE	holder, agent, or state company position	
PO.	3;55 pm. Dee RCUPINE MINING DIVISION		
1.0	TOOL HILL WILLIAM DIVIONAL		

Ministry of **Northern Development** and Mines

168 ALGONQUIN BLVD. EAST

EXPLORERS ALLIANCE CORPORATION

Ministère du Développement du Nord et des Mines

Ontario

Geoscience Assessment Office 933 Ramsey Lake Road 6th Floor Sudbury, Ontario P3E 6B5

Telephone: (888) 415-9845 (877) 670-1555

Visit our website at: www.gov.on.ca/MNDM/MINES/LANDS/mlsmnpge.htm

Dear Sir or Madam:

October 2, 2000

Lionel Bonhomme

TIMMINS, ONTARIO

P4N-1A9

Submission Number: 2.20574

Status

Subject: Transaction Number(s):

W0060.00353 Approval

We have reviewed your Assessment Work submission with the above noted Transaction Number(s). The attached summary page(s) indicate the results of the review. WE RECOMMEND YOU READ THIS SUMMARY FOR THE DETAILS PERTAINING TO YOUR ASSESSMENT WORK.

If the status for a transaction is a 45 Day Notice, the summary will outline the reasons for the notice, and any steps you can take to remedy deficiencies. The 90-day deemed approval provision, subsection 6(7) of the Assessment Work Regulation, will no longer be in effect for assessment work which has received a 45 Day Notice. Allowable changes to your credit distribution can be made by contacting the Geoscience Assessment Office within this 45 Day period, otherwise assessment credit will be cut back and distributed as outlined in Section #6 of the Declaration of Assessment work form.

Please note any revisions must be submitted in DUPLICATE to the Geoscience Assessment Office, by the response date on the summary.

If you have any questions regarding this correspondence, please contact LUCILLE JEROME by e-mail at lucille.jerome@ndm.gov.on.ca or by telephone at (705) 670-5858.

Yours sincerely,

ORIGINAL SIGNED BY

Steve B. Beneteau

Acting Supervisor, Geoscience Assessment Office

teven B. Beneteau

Mining Lands Section

Work Report Assessment Results

Submission Number:

2.20574

Date Correspondence Sent: October 02, 2000

Assessor: LUCILLE JEROME

Transaction Number

First Claim Number

Township(s) / Area(s)

Status

Approval Date

W0060.00353

11152

DENTON

Approval

October 02, 2000

Section:

16 Drilling PDRILL

Correspondence to:

Resident Geologist South Porcupine, ON

Assessment Files Library

Sudbury, ON

Recorded Holder(s) and/or Agent(s):

Lionel Bonhomme

EXPLORERS ALLIANCE CORPORATION

TIMMINS, ONTARIO

1232448 ONTARIO INC.

TIMMINS, ON

JOHN PETER HUOT TIMMINS, ONTARIO

