

DIAMOND DRILL CORE LOG-SUMMARY SHEET

Project: Arbutus Project 4010
Date: June 8 to 11, 2000
Logged by: Robert Calhoun
Drilling Co: Colbert Drilling

DDH: EAG00-7

Claim Number: 1217741

COLLAR LOCATION: L375W/192S

SURVEYS: Acid Test

TIMMINS COORDINATES

GRID COORDINATES

	<u>Depth</u>	<u>Azimuth</u>	<u>Dip</u>
Setup:	0.0m	Grid North 00°	-68°
	102.0m		-58°
	159.0m		-53°

Northing:	192S
Easting:	375W
Elevation:	0.0 meters
TD:	159.0 meters

DRILLING DATES

Started: June 8, 2000
Finished: June 11, 2000



DIAMOND DRILL SUMMARY LOG

Project: Arbutus Project 4010
 Date: June 8, 2000
 Logged By: R. Calhoun

DDH: EAG00-7

GEOLOGIC SUMMARY

FROM	TO	DESCRIPTION	INTERVAL			SIGNIFICANT ASSAY AVERAGES				
(m)	(m)		From (m)	To (m)	Width (m)	Cu ppm	Zn ppm	Pb ppm	Ag g/t	Au ppb
0.0	2.1	Overburden								
2.1	19.1	Rhyolite-foliated								
19.1	24.3	Mafic Tuff								
24.3	36.9	Rhyolite-foliated								
36.9	45.05	Mafic Volcanic								
45.05	51.9	Tuff/Magnetite Chert Iron Formation								
51.9	69.4	Tuff/Magnetite Chert Iron Formation	60.0	61.0	1.0	606	3870	112	1.3	77
69.4	96.9	Intermediate to Mafic Tuff								
96.9	104.5	Chert/Tuff Pyroclastic	101.7	103.0	1.3	260	11000	2360	1.1	19
104.5	108.1	Tuff/Chert/Sulfides	104.5	105.3	0.8	212	3500	780	0.8	12
			105.3	106.4	1.1	416	14900	6080	1.9	33
			108.1	108.8	0.7	1350	34300	9500	3.3	31
			108.8	109.9	1.1	375	29700	3880	1.5	33
108.1	120.1	Tuff/Chert/Sulfide/Graphite Zone	112.0	113.0	1.0	482	32300	27800	3.6	15
			113.0	114.4	1.4	106	10100	3240	0.9	5
			114.4	115.2	0.8	74	16900	3720	1.1	14
			117.0	118.1	1.1	53	12700	5500	0.8	7
			118.1	119.2	0.9	65	25200	10300	1.7	9
			119.2	120.4	1.2	122	25500	9900	2.0	14
120.4	128.7	Intermediate Tuff								
128.7	138.5	Mafic Dyke-lamprophyre								
138.5	159.0	Mafic to Intermediate Volcanic								
	159.0	End of Hole								

COMMENTS

Diamond Drill Log

Property: Arbutus Project 4010

Hole Number: EAG00-7

Claim Number: 1217741

Location: L375W/192S

Final Depth: 159.0 meters

Logged By: Robert Calhoun

Azimuth: Grid North 00°

Dates Drilled: June 8-11, 2000

Drilled By: Colbert Drilling

Dip: -68°

Dates Logged: June 11-12, 2000

Signature: 

Assays											
From	To	Description	Sample #	From	To	Length (meter)	Cu ppm	Zn ppm	Pb ppm	Ag ppm	Au ppb
0	2.1	Overburden									
2.1	19.1	Rhyolite-foliated -fine grained, light to medium grey to yellow green in sericitic sections, greater than 70% of section. The unit is highly foliated to near schistose in some sections >1m. There are random white to glassy quartz veins <10cm in size. Below 15m there are laminae of small veinlets of dark green chlorite on foliations. Sulfides of pyrite as cubes and possible sphalerite are associated with some of the chlorite as at 15.9m. There is a wider band of increased chlorite at 17.2 to 18.05m with grains of magnetite. Foliation is at 37° to core axis, locally contorted as at 10.5m. Lower contact is at 35° to core axis.									
19.1	24.3	Mafic Tuff -fine to medium grained, medium to dark green grey, foliated, carbonated in matrix and as small veinlets <4mm wide. The carbonate is minor calcite, dominantly ferro dolomite to ankerite. There are biotite rich sections especially near the upper contact with a 20cm biotite possible lamprophyre at the upper contact. There are minor patches to clots of white to pink feldspars to 21.5m. Foliation and lower contact at 34° to core axis. Sulfides are nil to trace.									

Diamond Drill Log

Hole # EAG00-7

						Assays					
From	To	Description	Sample #	From	To	Length (meter)	Cu ppm	Zn ppm	Pb ppm	Ag ppm	Au ppb
24.3	36.9	Rhyolite-foliated -fine grained, light grey to green yellow in sericite sections as above. The unit is less foliated and generally has more abundant chlorite laminae than in upper rhyolite. Sulfides of pyrite as small cubes are again associated with the chlorite. There are local sections with fine disseminations of pyrite and small elongated clusters. The foliation is at 34° to core axis. 34.4-36.9-unit becomes darker grey to green probable increase in chlorite and an increase in fine sulfides including pyrrhotite. There is an increase in quartz veining in this section. The end of the section from 36.3-36.9m is mainly quartz 65% with blobs and massive bands of pyrrhotite minor pyrite and infrequent chalcopyrite. The quartz is milky white with minor grey colouration near end of section. Pyrrhotite is 10% of section, remainder is rhyolitic. Lower contact -32° to core axis.	8047	36.3	36.9	0.6	477	1540	1	1.0	10
36.9	45.05	Mafic Volcanic -fine grained to locally medium grained, dark green generally with carbonate laminae to veinlets. The unit is well foliated at 31° to core axis. Sulfides are minor except for a massive pyrrhotite band at 37.9-38.05m. Contacts at 33° to core axis. Lower contact of unit at 39° to core axis.									
45.05	51.9	Tuff/Magnetite Chert Iron formation -fine grained, colour variable dark green, beige and grey cherty alternating layers at 36° to core axis. The layering is chloritic tuff, probable carbonate rich layering (beige) and lesser chert (grey). The unit is highly magnetite with magnetite as darker layers. Sulfides of pyrrhotite are minor but do occur locally as massive veinlets.									
51.9	69.4	Tuff/Magnetite Chert IRM formation -fine grained, alternating bands of beige carbonate, medium to dark green tuff and grey to whitish chert. This unit is smaller to the above unit except the pyrrhotite, lesser pyrite dominate with minor magnetite rich layers. Chert is more abundant in the section as is	8048	51.9	53.2	1.3	363	125	1	0.5	14
			8049	53.2	54.5	1.3	356	136	1	0.5	15
			8050	54.5	56.3	1.8	195	664	11	0.4	27
			8051	56.3	57.3	1.0	250	595	5	0.5	10
			8052	57.3	58.6	1.3	189	620	2	0.4	5

Diamond Drill Log

Hole # EAG00-7

				Assays									
From	To	Description	Sample #	From	To	Length (meter)	Cu ppm	Zn ppm	Pb ppm	Ag ppm	Au ppb		
69.4	96.9	quartz. There are sections of dominantly tuff with abundant pyrrhotite. The pyrrhotite up to 20% in some sections occurs at mainly massive veinlets, locally discordant, minor disseminations. Pyrite is minor and chalcopyrite is nil to trace. Unit is conductive over sections up to 0.5m.	8053	58.6	60.0	1.4	380	840	3	0.8	2		
			8054	60.0	61.0	1.0	606	3870	112	1.3	77		
			8055	61.0	62.0	1.0	163	549	18	0.4	17		
			8056	62.0	63.0	1.0	242	856	1	0.6	19		
			8057	63.0	64.5	1.5	203	672	8	0.4	12		
			8058	64.5	66.0	1.5	265	3980	5	1.0	218		
				54.5-58.6-generally tuff with 15-20% pyrrhotite possible sphalerite.	8059	66.0	67.5	1.5	339	83	1	0.5	69
				Lower contact is marked by graphite laminae, black, glassy at 42° to core axis.	8060	67.5	68.5	1.0	225	119	1	0.3	115
					8061	68.5	69.4	0.9	205	310	1	0.4	60
				Intermediate to Mafic Tuff -fine to medium grained, medium green to dark green grey. The unit although dark has sericite alteration on foliations. The unit is well foliated to weakly schistose over short sections. There is abundant carbonate as small veinlets mainly carbonate and small <0.5cm white to glassy quartz. Sulfides are trace to minor pyrite and pyrrhotite no base metals noted except for minor sphalerite associated with small quartz veinlets below 94.0m. Foliation is at 40° to core axis, lower contact is contorted at 30° to core axis.									
		96.9	104.5	Chert/Tuff Pyroclastic -fine grained, light green grey alternating with bands of darker tuff and chert grey. There are fragments of chert grey in this section light grey giving the fragmental appearance. Sulfides are pyrrhotite pyrite with chalcopyrite and sphalerite being noted. Unit is sericitic.	8062	96.9	98.1	1.2	149	59	1	0.2	9
8063	98.1				99.2	1.1	79	217	1	0.2	36		
8064	99.2				100.7	1.5	66	71	1	0.2	7		
8065	100.7				101.7	1.0	419	62	2	0.7	21		
8066	101.7				103.0	1.3	260	11000	2360	1.1	19		
8067	103.0				104.5	1.5	66	164	39	0.3	nil		
104.5	108.1	Tuff/Chert/Sulfides -fine grained, medium grey to dark green with increasing sericite to light green towards end of section. Foliation is at 51° to core axis but becomes highly contorted 106.4-107.3m. Sulfides are pyrrhotite, pyrite with scattered sphalerite and chalcopyrite. Laminae of sphalerite grains are well developed in a 10cm band at 105.15-105.25m with discontinuous laminae of chalcopyrite.	8068	104.5	105.3	0.8	212	3500	780	0.8	12		
			8069	105.3	106.4	1.1	416	14900	6080	1.9	33		
			8070	106.4	107.3	0.9	32	83	30	0.2	9		
			8071	107.3	108.1	0.8	29	248	205	0.2	5		

Diamond Drill Log

Hole # EAG00-7

Assays											
From	To	Description	Sample #	From	To	Length (meter)	Cu ppm	Zn ppm	Pb ppm	Ag ppm	Au ppb
108.1	120.1	Tuff/Chert/Sulfide/Graphite Zone -fine grained tuff interspersed with chert, graphite bands and quartz veining. Sulfides within this section are pyrrhotite, pyrite, sphalerite, chalcopyrite and galena. Graphite occurs as "veins", veinlets in tuff. The relative percentages of each mineral are highly variable as noted below.									
		108.1-109.9-chert layer with sphalerite light brown tan to red brown; locally to 8%, 3-5% overall. Sphalerite occurs as laminae as at upper contact, clots/knots and discontinuous fracture fillings in the chert. Sphalerite can be 2mm wide in fracture fillings. Chalcopyrite is randomly distributed in this section as clots to 0.5cm especially near upper contact. Graphite mainly in one band at 108.6m possible 10cm wide but highly crushed.	8072	108.1	108.8	0.7	1350	34300	9500	3.3	31
			8073	108.8	109.9	1.1	375	29700	3880	1.5	33
		109.9-113.0-Chert/Tuff graphite sulfide section-sulfides are dominantly pyrrhotite with pyrite, sphalerite, chalcopyrite and galena noted in decreasing abundance. Graphite is as above.	8074	109.9	111.0	1.1	124	2830	1690	1.2	26
			8075	111.0	112.0	1.0	78	861	1280	1.1	2
			8076	112.0	113.0	1.0	482	32300	27800	3.6	15
		113.0-114.4-chert with minor sulfides of pyrrhotite, pyrite, minor sphalerite chalcopyrite.	8077	113.0	114.4	1.4	106	10100	3240	0.9	5
		114.4-120.4-tuff section hosting sphalerite, galena, chalcopyrite minor graphite and abundant quartz veining. Sphalerite in this section is up to 15% over sections to 0.5m especially from 117-120.4m. Galena is locally abundant as fracture filling again especially from 117.0m to 120.4m. Chalcopyrite is as small clots to fine laminae. Quartz in this section is up to 20% as white milky veins to 0.5m. Pyrite in the quartz sections is bright white in other portions is dull.	8078	114.4	115.2	0.8	74	16900	3720	1.1	14
			8079	115.2	116.1	0.9	40	425	344	0.5	nil
			8080	116.1	117.0	0.9	36	2330	1290	0.6	10
			8081	117.0	118.1	1.1	53	12700	5500	0.8	7
			8082	118.1	119.2	0.9	65	25200	10300	1.7	9
			8083	119.2	120.4	1.2	122	25500	9900	2.0	14
120.4	128.7	Intermediate Tuff -fine grained, light grey green to medium grey, foliated to laminated with minor cherty sections. Sulfides are disseminated pyrite mainly with possible sphalerite locally, giving core a reddish tinge, possible potassic alteration. Lower contact broken, upper at 45° to core axis. Pyrite chalcopyrite at lower contact over 5cm.	8084	120.4	121.3	0.9	32	2680	1030	0.4	3
			8085	121.3	122.6	1.3	54	178	48	0.6	9
			8086	127.2	128.7	1.3	33	370	73	0.2	3
128.7	138.5	Mafic Dyke-lamprophyre -fine grained contacts 10-20cm, medium grained dark									

Diamond Drill Log

Hole # EAG00-7

Assays											
From	To	Description	Sample #	From	To	Length (meter)	Cu ppm	Zn ppm	Pb ppm	Ag ppm	Au ppb
138.5	159.0	green to epidote green with dark amphibole grains to 1mm. Carbonate weakly accumulated at contacts. Upper contact crushed, lower contact 80° to core axis.									
		Mafic to Intermediate Volcanic -fine grained, light to medium grey green, weakly to moderately foliated at 46° to core axis. Unit has fairly abundant small carbonate (calcite) and quartz carbonate veinlets <0.5cm to laminae on foliations. Sulfides are generally minor but sphalerite was noted in a few locations as small veinlets as at 153.2m. Pyrite can also occur on foliation planes.	8087	138.5	139.9	1.4	58	195	25	0.4	5
	159.0	End of Hole									
		Acid Test									
		102m -58°									
		159m -53°									

DIAMOND DRILL CORE LOG-SUMMARY SHEET

Project: Arbutus Project 4010
Date: June 11 & 12, 2000
Logged by: Robert Calhoun
Drilling Co: Colbert Drilling

DDH: EAG00-8

Claim Number: 1217741

COLLAR LOCATION: L600W/190S

SURVEYS: Acid Test

TIMMINS COORDINATES

GRID COORDINATES

	<u>Depth</u>	<u>Azimuth</u>	<u>Dip</u>
Setup:	0.0m	Grid North 00°	-45°
	120.0m		-31°

Southing:	190S
Westing:	600W
Elevation: 0.0 meters	
TD: 120.01 meters	

DRILLING DATES

Started: June 11, 2000
Finished: June 12, 2000

30
10
10
00
00



DIAMOND DRILL SUMMARY LOG

Project: Arbutus Project 4010
 Date: June 11, 2000
 Logged By: R. F. Calhoun

DDH: EAG00-8

GEOLOGIC SUMMARY

GEOLOGIC SUMMARY										
FROM	TO	DESCRIPTION	INTERVAL			SIGNIFICANT ASSAY AVERAGES				
(m)	(m)		From (m)	To (m)	Width (m)	Cu ppm	Zn ppm	Pb ppm	Ag ppm	Au ppb
0.0	18.9	Casing								
18.9	54.2	Felsic Volcanic								
54.2	58.7	Mafic Volcanic								
58.7	67.3	Felsic Volcanic								
67.3	72.8	Mafic Volcanic								
72.8	84.4	Felsic Volcanic								
84.4	85.8	Chert/Pyrrhotite Iron formation								
85.8	90.6	Mafic to Intermediate Tuff								
90.6	101.2	Chert/Tuff/Sulfide/Magnetite Iron Form	99.0	100.5	1.5	194	22600	2040	2.4	21
			100.5	101.2	0.7	859	12500	3960	2.0	9
101.2	120.01	Intermediate to Mafic Volcanic								
	120.01	End of Hole								

COMMENTS

Diamond Drill Log

Property: Arbutus Project 4010

Hole Number: EAG00-8

Claim Number: P 1217741

Location: L600W/190S

Final Depth: 120.0 meters

Logged By: Robert Calhoun

Azimuth: Grid North 00°

Dates Drilled: June 11-12, 2000

Drilled By: Colbert Drilling

Dip: -45°

Dates Logged: June 13, 2000

Signature: 

Assays

From	To	Description	Sample #	From	To	Length (meter)	Cu ppm	Zn ppm	Pb ppm	Ag ppm	Au ppb
0	18.9	Overburden									
18.9	54.2	<p>Felsic Volcanic -fine grained, medium grey to light yellow green, bleached, moderately siliceous can be scratched with a knife locally. The unit is foliated to locally near schistose. The lighter yellow green sections have a higher sericite content and locally become translucent. The unit can be "layered" and giving the unit a tuffaceous nature. There are sections between 50.5-54.2m that have a pinkish hue, possible potassic alteration. There are a number of small (largest 50cm) generally <20cm bands of dark green, carbonated mafic tuff parallel to the foliation (e.g. at 24.0-24.1m, 24.3-24.4m, 32.6-32.7m, larger section at 36.4-36.9m). Foliations are at 44° to core axis. There are fine laminae of chlorite in foliations mainly between 42.0 and 48.0m. Lower contact at 38° to core axis.</p>									
54.2	58.7	<p>Mafic Volcanic -medium to fine grained, medium to dark green, moderately hard, weakly siliceous. The unit is weakly foliated to massive. Carbonate as fine laminae to small veinlets is calcite. The calcite also occurs in the matrix as grains giving a coarser texture. The lower contact area is finer grained, darker, contact at 46° to core axis.</p>									

Diamond Drill Log

Hole # EAG00-8

							Assays				
From	To	Description	Sample #	From	To	Length (meter)	Cu ppm	Zn ppm	Pb ppm	Ag ppm	Au ppb
58.7	67.3	Felsic Volcanic -fine grained, light grey to pinkish hue as at end of above section. Unit is as above. Foliations at 42° to core axis. Minor mafic bands. The lower contact area 66-67.3m becomes darker in colour and is laminated. Lower contact at 53° to core axis.									
67.3	72.8	Mafic Volcanic -fine to medium grained, medium to dark green, maybe fetholeiite. The unit is strongly carbonated with calcite in matrix locally, and abundant small veinlets <2mm wide. The veinlets are parallel to the foliation which is local strong at 67° to core axis. The unit contains small grains of magnetite making the unit strongly magnetic especially from 68.2-71.5m-weaker over remainder of the unit. The foliations are locally contorted with kink band developing at 69.6m. Lower contact at 71° to core axis.									
72.8	84.4	Felsic Volcanic -fine grained, light grey beige to pinkish to darker grey green where chlorite occurs. Unit is foliated to laminated at 67° to core axis. Sericite gives core yellow green colour and there is some bleaching. 79.9-81.5m -chlorite foliation to lamination with probable pink garnets especially at upper contact area 79.9-80.4m.									
84.4	85.8	Chert/Pyrrhotite Iron Formation -medium grey chert, fragmental with pyrrhotite supporting the fragments. Pyrrhotite is 35-40% of section as massive stringers. Upper contact at 80° to core axis, lower contact crushed.	8088	84.4	85.8	1.4	205	92	2	0.7	12
85.8	90.6	Mafic to Intermediate Tuff -medium grained, medium to dark green, abundant calcite carbonate in matrix and as small veinlets. There are small <5cm quartz veinlets, milky white. The end of the section is a quartz vein.									

Diamond Drill Log

Hole # EAG00-8

		Assays									
From	To	Description	Sample #	From	To	Length (meter)	Cu ppm	Zn ppm	Pb ppm	Ag ppm	Au ppb
90.6	101.2	Chert/Tuff/Sulfide/Magnetite Iron Formation -fine grained tuff as above intermixed with chert in upper section becoming chert magnetite to chert sulfide IF down section. Generally dark grey to medium green tuff laminated in dark grey chert. Sulfides are mainly pyrrhotite with minor pyrite. Sphalerite is as fine laminae fracture fillings and small veinlets mainly from 99.0-101.2m. 90.6-94.4-mainly tuff with 10% chert layering. There is a massive pyrrhotite band at 91.25-91.45m magnetic. Remainder of section has 10-15% pyrrhotite. 94.4-99.0-chert magnetite IF with <10% pyrrhotite very minor pyrite 99.0-101.2-chert/magnetite with 1-3% sphalerite red brown. There is 5-8% sphalerite from 100.7-101.2m. 99.3-fault zone with some graphite.									
			8089	90.6	91.6	1.0	912	1580	5	1.5	31
			8090	91.6	93.0	1.4	239	309	4	0.7	62
			8091	93.0	94.4	1.4	166	850	2	0.6	29
			8092	94.4	96.0	1.6	190	997	1	0.4	86
			8093	96.0	97.5	1.5	86	106	1	0.2	434
			8094	97.5	99.0	1.5	106	68	1	0.3	290
			8095	99.0	100.5	1.5	194	22600	2040	2.4	21
			8096	100.5	101.2	0.7	859	12500	3960	2.0	9
101.2	120.01	Intermediate to Mafic Volcanic -medium to fine grained, medium green to dark green, chloritic and the unit has abundant calcite to locally greater than 10% as small veinlets <0.5cm, laminae in foliations and in the matrix. There are small quartz veinlets and one larger milky white vein at 109.2-109.5m. The unit is foliated at 62° to core axis. The foliation is weak and the unit appears generally massive.									
	120.01	End Of Hole Acid Test 120m -31°									

DIAMOND DRILL CORE LOG-SUMMARY SHEET

Project: Arbutus Project - #4010
Date: June 25-28, 1999
Logged by: Robert Calhoun
Drilling Co: Colbert Drilling

DDH: HMG99-5

Claim Number: P 1217741

COLLAR LOCATION: L200E/100S

SURVEYS: Acid Test

TIMMINS COORDINATES

GRID COORDINATES

	<u>Depth</u>	<u>Azimuth</u>	<u>Dip</u>
Setup:	0.0m	Grid South	-45°
	171.0m		-42°

Northing:	100S
Easting	200E
Elevation: 0.0 meters	
TD: 171.1 meters	

DRILLING DATES

Started: June 25, 1999
Finished: June 28, 1999

100
200
300
400



DIAMOND DRILL SUMMARY LOG

Project: Arbutus Project - #4010
 Date: June 25, 1999
 Logged By: R. Calhoun

DDH: HMG99-5

GEOLOGIC SUMMARY

FROM		TO	DESCRIPTION	INTERVAL			SIGNIFICANT ASSAY AVERAGES				
(m)	(m)			From (m)	To (m)	Width (m)	Cu ppm	Zn ppm	Pb ppm	Ag g/t	Au ppb
0.0	1.6		Casing								
1.6	21.6		Mafic Volcanic								
21.6	35.0		Mafic Volcanic								
35.0	62.3		Mafic Volcanic								
62.3	86.4		Intermediate Volcanic	74.7	77	2.3	29.3	222	442	1.7	5
86.4	95.9		Mafic Volcanic								
95.9	105.4		Intermediate Volcanic								
105.4	139.6		Intermediate Volcanic (Tuff)								
139.6	155.9		Intermediate Volcanic								
155.9	166.9		Chert Sulfide Iron Formation								
166.9	171.0		Tuff								
171.0			End of Hole								

COMMENTS

Diamond Drill Log

Property: Arbutus Project - #4010

Hole Number: HMG99-5

Claim Number: P 1217741

Location: L200E/100S

Final Depth: 171.0 meters

Logged By: Robert Calhoun

Azimuth: Grid South

Dates Drilled: June 25-28, 1999

Drilled By: Colbert Drilling

Dip: -45°

Dates Logged: June 28-29, 1999

Signature: 

Assays

From	To	Description	Sample #	From	To	Length (meter)	Cu ppm	Zn ppm	Pb ppm	Ag g/ton	Au ppb
0	1.6	Casing									
1.6	21.6	<p>Mafic Volcanic -fine to medium grained, medium to dark green, moderately siliceous with coarser mottled texture increasing downhole. The mottling is dark green sub-rounded to irregular slightly stretched spots. These sections are moderately magnetic. Unit is mainly massive with occasional calcite veinlets. Sulfies are restricted to minor quartz veined sections.</p> <p>12.8-13.2-quartz/carbonate vein with minor salmon colour feldspars. Pyrite is 10% with 1% chalcopyrite as clots or clusters.</p> <p>13.7-14.0-barren white quartz vein with minor carbonate.</p>									
21.6	35.0	<p>Mafic Volcanic -fine grained, medium to dark green, foliated at 46° with local kink foliation as at 24.4m. Calcite veinlets are abundant fine laminae to <3mm wide. Pyrite is minor small laminae to local disseminations, less than 1% to minor.</p>									
35.0	62.3	<p>Mafic Volcanic -medium grained to locally fine grained over 1-2 meters. Unit has mottled texture as above with moderate magnetite to strongly magnetic. Possible grains of magnetite noted is</p>									

Diamond Drill Log

Hole # HMG99-5

Assays											
From	To	Description	Sample #	From	To	Length (meter)	Cu ppm	Zn ppm	Pb ppm	Ag g/ton	Au ppb
62.3	86.4	<p>same section. Calcite veining is minor. Minor hematite on some fractures. Unit has minor epidote. Sulfides are nil to trace disseminations of pyrite. Where unit has increased calcite the colour is slightly lighter. Unit has weak foliation at 47° to core axis.</p> <p>Intermediate Volcanic -medium grained, light grey to grey green, grainy textured with abundant calcite veinlets <4mm and calcite in matrix possibly causing grainy appearance. Unit has minor chlorite on some foliations which are 45° to core axis. Unit may be tuffaceous based on foliations and textures.</p> <p>Sulfides are minor with local concentrations noted below and chalcopryite is minor. Quartz veining is as <10cm veins.</p> <p>74.7-77.0-pyrite/pyrrhotite 10% locally with chalcopryite 1% overall with local 5% in massive vein as at 76.1m. Although chalcopryite is associated with pyrite, the pyrite is preferential to the quartz veining. Section is 20% quartz/10% carbonate veinlets.</p> <p>78.0-78.7-healed fault zone, breccia</p> <p>78.7-79.0-Graphite Zone-minor chalcopryite in quartz vein.</p> <p>79.0-86.4-calcite decreasing down section colour darkening.</p>	23608 23609	74.7 76.0	76.0 77.0	1.3 1.0	1190 5130	91 392	5 1010	0.4 3.4	7 2
86.4	95.9	<p>Mafic Volcanic -fine grained, dark green to medium green grey, soft, chloritic. Small <10cm quartz veins, calcite veinlets <3mm. Calcite locally in matrix.</p>									
95.9	105.4	<p>Intermediate Volcanic -medium grained, light green with carbonate coarser sections, weakly epidotized.</p>									
105.4	139.6	<p>Intermediate Volcanic (Tuff) -fine grained, light green grey to medium green grey, foliated to laminated probably fine tuff. There are abundant small quartz veins (<5cm), calcite veinlets <1cm. The foliated/laminated nature of the unit</p>									

Diamond Drill Log

Hole # HMG99-5

							Assays				
From	To	Description	Sample #	From	To	Length (meter)	Cu ppm	Zn ppm	Pb ppm	Ag g/ton	Au ppb
		suggests it is tuff but locally it appears as a flow. There is no grading, but there are contorted layers. Foliation 44° to core axis to sub-parallel.									
139.6	155.9	Intermediate Volcanic -unit is similar to 95.9-105.4, with epidotization locally, abundant calcite veining to veinlets. Quartz veining is small and infrequent.									
155.9	166.9	Chert Sulfide Iron Formation -chert layers medium to dark grey alternating with yellowish to green tuffaceous layers. Carbonate probably giving yellow colour possibly sericite? Sulfides are mainly pyrrhotite with minor trace chalcopyrite, pyrrhotite is 5-10%. Possibly sphalerite rich layer 5cm at 166.7m. Layering 53° to core axis. Quartz veining is greyish to white.	23610 23611 23612	155.9 162.2 165.4	157.0 163.2 166.9	1.1 1.0 1.5	131 120 117	83 121 521	6 5 1	0.1 0.2 0.2	nil 10 15
166.9	171.0	Tuff -fine grained, layered dark green chloritic tuff. Small sulfide layer at 168.7m. Garnets occur in chloritic layers at 168.1-168.2m and 168.6-168.7m.									
	171.0	End Of Hole Acid Test 171m -42									

DIAMOND DRILL CORE LOG-SUMMARY SHEET

Project: Arbutus Project - #4010
Date: June 29 to July 2, 1999
Logged by: Robert Calhoun
Drilling Co: Colbert Drilling

DDH: HMG99-6

Claim Number: P 1217741

COLLAR LOCATION: L375E/175S

SURVEYS: Acid Test

TIMMINS COORDINATES

GRID COORDINATES

	<u>Depth</u>	<u>Azimuth</u>	<u>Dip</u>
Setup:	<u>0.0m</u>	<u>Grid North</u>	<u>-55°</u>
	<u>102.0m</u>		<u>-51°</u>

Northing:	175S
Easting:	375W
Elevation:	0.0 meters
TD:	102.0 meters

DRILLING DATES
Started: June 29, 1999
Finished: July 2, 1999

22 . 21585



DIAMOND DRILL SUMMARY LOG

Project: Arbutus Project - #4010
 Date: June 29, 1999
 Logged By: R. Calhoun

DDH: HMG99-6

GEOLOGIC SUMMARY

FROM	TO	DESCRIPTION	INTERVAL			SIGNIFICANT ASSAY AVERAGES				
(m)	(m)		From (m)	To (m)	Width (m)	Cu ppm	Zn ppm	Pb ppm	Ag g/t	Au ppb
0.0	1.8	Casing								
1.8	10.0	Tuffaceous Sediments/Tuff								
10.0	29.3	Chert Sulfide Iron Formation /Tuffaceous Sediments								
29.3	52.5	Intermediate Volcanic								
52.5	71.2	Chert Iron Formation /Tuffaceous Sediments	68.2	77.8	9.6	194	15083	4446	2.0	23
71.2	75.1	Tuff to Tuffaceous Sediments								
75.1	77.8	Massive Sulfides/Tuff	75.8	77.1	1.3	239	56069	16477	5.7	35
77.8	84.0	Tuff/Chert IF	73.8	77.8	4.0	346	28237	8479	3.6	29
84.0	86.6	Quartz Vein								
86.6	90.1	Tuffaceous Sediment/Tuff/Chert IF								
90.1	93.4	Mafic Dyke								
93.4	95.2	Chert IF/Tuff								
95.2	102.0	Tuff								
102.0	.	End of Hole								

COMMENTS

Diamond Drill Log

Property: Arbutus Project - #4010

Hole Number: HMG99-6

Claim Number: P 1217741

Location: L375W/175S

Final Depth: 102.0 meters

Logged By: Robert Calhoun

Azimuth: Grid North

Dates Drilled: June 29-July 2, 1999

Drilled By: Colbert Drilling

Dip: -55°

Dates Logged: July 2-July 3, 1999

Signature: 

Assays

From	To	Description	Sample #	From	To	Length (meter)	Cu ppm	Zn ppm	Pb ppm	Ag g/ton	Au ppb
0	1.8	Casing									
1.8	10.0	Tuffaceous Sediments/Tuff -fine grained to medium grained, medium to dark grey green, minor grey cherty layers. Unit is foliated to laminated at 35° to core axis. Carbonate (calcite) as feathered veins, small veinlets and in matrix. Sulfides of pyrite pyrrhotite occur with the chert layering with pyrite in layer at 3.8-4.4m with quartz vein, massive 10cm, 4.3-4.4m. Minor chalcopyrite. Garnet in layer at 3.6m.	23613	3.8	4.8	1.0	439	2560	64	1.5	31
10.0	29.3	Chert Sulfide Iron Formation/Tuffaceous Sediments -Unit is approximately 50/50 with fine grained, probably argillaceous sediment, fine to medium tuffaceous sections as at 16.4-18.1m. Chert layers are medium grey generally with 10-15% pyrrhotite as massive veinlets and fracture fillings. Locally carbonate ± sericite form part of the iron formation. Unit is variably magnetic due to pyrrhotite and possible magnetite. Sphalerite minor is mainly below 24.0m. there is an increase in chalcopyrite below 24.0m to 1-2% locally as fine laminae and fracture fillings. Small clusters in pyrrhotite are minor. Lower contact is a 10cm quartz vein white after 20cm of argillite.	23614 23615 23616 23617 23618	19.1 24.0 25.0 27.0 28.0	20.4 25.0 26.2 28.0 29.2	1.3 1.0 1.2 1.0 1.2	288 142 126 166 666	197 1120 277 63 64	3 16 1 1 10	0.5 0.3 0.4 0.3 1.2	58 118 621 26 24
29.3	52.5	Intermediate Volcanic -fine to medium grained, light to medium green grey, with									

Diamond Drill Log

Hole # HMG99-6

Assays												
From	To	Description	Sample #	From	To	Length (meter)	Cu ppm	Zn ppm	Pb ppm	Ag g/ton	Au ppb	
52.5	71.2	abundant calcite in matrix and as veinlets <2cm generally <1cm. Unit is foliated weakly at 51° to core axis. Weak sericite. The unit may be welded tuff. Very minor section of weak magnetics. Chert Iron Formation/Tuffaceous Sediments -fine grained, grey/black to greenish fine sediments alternating in layers with chert. The chert layers are generally black in the upper section to 63.0m with medium to dark grey dominating lower portion. The chert is magnetic due to magnetite. The tuffaceous sections are weakly sericitic, carbonated. Lamination is thin to moderate. Sulfide content in the upper portion is minor. Lower section contains pyrrhotite/pyrite sphalerite and chalcopyrite in varying proportions. Upper contact at 52° to core axis, as the foliation. 57.4-57.9-autobrecciated chert-black minor sulfides magnetic 57.9-63.0-magnetic-moderate to strong due to magnetite 63.7-65.5-laminated chert siliceous tuffaceous material dark green. Pyrrhotite 10% overall with minor chalcopyrite. 65.5-(72)-unit is lighter in colour with chert layers dominant and medium grey to locally light grey. Section has 1-10% pyrrhotite, 1-3% pyrite locally especially below 68.5m. Sphalerite as red brown fracture fillings occur over 1-2m. Galena noted but minor. Minor graphite noted at 68.3m. 63.9-65.4-10% pyrrhotite, minor chalcopyrite 67.1-68.2-5% pyrrhotite, minor chalcopyrite 68.2-69.2-5%-10% sphalerite, <1% chalcopyrite, minor galena 69.2-70.2-2-3% sphalerite, minor chalcopyrite 70.2-71.4-5-10% pyrrhotite, 5-10% pyrite minor sphalerite, and chalcopyrite.										
			23619	63.9	65.4	1.5	80	147	1	0.1	17	
			23620	65.4	67.1	1.7	29	55	3	0.2	19	
			23621	67.1	68.2	1.1	37	778	466	0.2	10	
			23622	68.2	69.2	1.0	142	15800	4380	1.3	21	
			23623	69.2	70.2	1.0	107	9720	1880	0.8	9	
			23624	70.2	71.2	1.0	39	360	73	0.4	5	
			23625	71.2	72.2	1.0	74	996	243	0.6	46	
71.2	75.1	Tuff to Tuffaceous Sediments -fine to locally medium grained, medium grey to grey green with layers of greyish chert to quartz veins 50%										

Diamond Drill Log

Hole # HMG99-6

From	To	Description	Sample #	Assays									
				From	To	Length (meter)	Cu ppm	Zn ppm	Pb ppm	Ag g/ton	Au ppb		
75.1	77.8	of section. Mineralization is as pyrite as semi-massive veinlets <10%, sphalerite, minor galena, chalcopyrite 71.2-72.0-Mainly tuff with 5% pyrite 72.0-73.8-45% chert/quartz, 10-15% pyrite as semi-massive veinlets, <1% sphalerite as red brown grains.	23626	72.2	73.8	1.6	73	3110	1370	1.1	15		
		73.7-73.8-black crystal tuff material 73.8-75.1-25% chert/quartz with sericitic tuff, 10% pyrite and 8-10% sphalerite as discontinuous veinlets, galena <1% as random grains. Minor chalcopyrite as small discontinuous laminae	23627	73.8	75.1	1.3	108	25300	7450	2.2	17		
		Massive Sulfides/Tuff -massive pyrrhotite and pyrite with 10% quartz to chert and <5% tuffaceous material. Sphalerite as red brown to brown discontinuous veinlets, disseminated grains, galena as random grains.											
		75.1-75.8-massive pyrrhotite, 10% pyrite minor sphalerite	23628	75.1	75.8	0.7	1070	280	254	2.8	19		
		75.8-76.1-tuff-2% sphalerite, minor galena	23629	75.8	76.1	0.3	238	38300	17400	2.9	14		
		76.1-77.8-80% massive sulfides mainly pyrrhotite, 20% chert/quartz. Sphalerite is 20% as discontinuous veinlets to 1cm, finer laminae, and grains. Galena to <1% as grains, minor chalcopyrite.	23630 23631	76.1 77.1	77.1 77.8	1.0 0.7	239 262	61400 9960	16200 3760	6.6 2.9	41 51		
		77.8	84.0	Tuff/Chert IF -Mixed zone of tuff fine grained to medium grained, grey to grey green, local sericite. There is 30% pyrrhotite, pyrite through the section as massive veinlets as fracture fillings contorted veinlets and disseminations. Sphalerite is minor to 1% as veinlets and dissemination. Local graphite.	23632 23633 23634 23635	77.8 79.3 81.0 82.5	79.3 81.0 82.5 84.0	1.5 1.7 1.5 1.5	158 139 73 70	255 286 294 2740	126 30 32 608	0.9 0.6 0.6 0.9	33 38 129 27
		84.0	86.6	Quartz Vein -white to grey quartz vein with minor sulfides of pyrite mainly, minor muscovite in some fractures.	23636 23637	84.0 85.5	85.5 86.7	1.5 1.1					14 10
		86.6	90.1	Tuffaceous Sediment/Tuff/Chert IF -Mixed zone as above with fine to medium tuff/50% chert with 10-20% sulfides of pyrrhotite pyrite minor sphalerite/galena/chalcopyrite.	23638 23639 23640	86.7 88.2 89.2	88.2 89.2 90.1	1.5 1.0 0.9	106 154 80	94 77 36	11 5 22	0.2 0.3 0.2	48 19 31

Diamond Drill Log

Hole # HMG99-6

Assays											
From	To	Description	Sample #	From	To	Length (meter)	Cu ppm	Zn ppm	Pb ppm	Ag g/ton	Au ppb
90.1	93.4	Mafic Dyke -dark green, medium grained with black colour at upper and lower contacts which are crushed/broken. Calcite as veinlets and grains especially in contact areas.									
93.4	95.2	Chert IF/Tuff -as above but sulfides are 20-25% with a massive pyrrhotite vein near lower contact 94.95-95.2m. Sulfides above this vein are mainly pyrite with minor sphalerite. Lower contact 46° to core axis.	23641	93.4	95.2	1.8	190	161	17	0.4	15
95.2	102.0	Tuff -fine to medium grained, medium grey green to green grey, downhole unit is thinly foliated to laminated with calcite veinlets on foliation, locally contorted. Minor pyrite.									
	102.0	End Of Hole Acid Test 102m -51°									

DIAMOND DRILL CORE LOG-SUMMARY SHEET

Project: Arbutus Project 4010
Date: June 12 to 14, 2000
Logged by: Robert Calhoun
Drilling Co: Colbert Drilling

DDH: EAG00-9

Claim Number: 1217741

COLLAR LOCATION: L200W/270S

SURVEYS: Acid Test

TIMMINS COORDINATES

GRID COORDINATES

	<u>Depth</u>	<u>Azimuth</u>	<u>Dip</u>
Setup:	0.0	<u>Grid North 00°</u>	-45°
	105.0		-34°
	150.0		-31°

Southing:	270S
Westing:	200W
Elevation:	0.0 meters
TD:	156.6 meters

DRILLING DATES

Started: June 12, 2000
Finished: June 14, 2000

2
2
1
5
9
5



DIAMOND DRILL SUMMARY LOG

Project: Arbutus Project 4010
 Date: June 12, 2000
 Logged By: R. Calhoun

DDH: EAG00-9

GEOLOGIC SUMMARY

FROM		TO		DESCRIPTION	INTERVAL			SIGNIFICANT ASSAY AVERAGES			
(m)	(m)	From (m)	To (m)		Width (m)	Cu ppm	Zn ppm	Pb ppm	Ag g/t	Au ppb	
0.0	0.6			Casing							
0.6	9.9			Mafic to Intermediate Volcanics							
9.9	14.5			Intermediate Tuff							
14.5	15.8			Mafic Tuff-Sediment							
15.8	32.6			Mafic Dyke							
32.6	40.3			Mafic Tuff/Magnetite Iron Formation							
40.3	51.1			Intermediate to Mafic Volcanics							
51.1	69.7			Mafic Dyke							
69.7	88.6			Chert/Magnetite Iron Formation							
88.6	97.8			Intermediate to Felsic Volcanic							
97.8	103.5			Felsic Pyroclastic-Breccia							
103.5	110.8	106.6	107.8	Chert/Sulfide/Graphite	1.2	364	27800	9880	2.2	34	
		107.8	108.5		0.7	23	4680	1460	0.2	nil	
110.8	124.4			Chert/Tuffaceous Sediments							
124.4	136.4	132.1	133.0	Chert/Sulfide/Graphite Iron Formation	0.9	104	33600	6880	2.2	14	
136.4	150.9				Intermediate to Mafic Volcanic						
150.9	156.6			Mafic Volcanics							
	156.6			End of Hole							

COMMENTS

Diamond Drill Log

Property: Arbutus Project 4010

Hole Number: EAG00-9

Claim Number: P 1217741

Location: L200W/227S

Final Depth: 156.6 meters

Logged By: Robert Calhoun

Azimuth: Grid North 00°

Dates Drilled: June 12-14, 2000

Drilled By: Colbert Drilling

Dip: -45°

Dates Logged: June 14-15, 2000

Signature: 

Assays

From	To	Description	Sample #	From	To	Length (meter)	Cu ppm	Zn ppm	Pb ppm	Ag ppm	Au ppb
0	0.6	Casing Bedrock setup									
0.6	9.9	Mafic to Intermediate Volcanics -fine grained, medium to dark green, massive, weakly foliated, chloritic, local limonite staining in crushed and broken core. Calcite as small veinlets <3mm wide weakly aligned. Lower contact 44° to core axis.									
9.9	14.5	Intermediate Tuff -fine to medium grained, generally grey green, light to medium with brown contact upper, possible biotite. The unit is thinly to thickly laminated to bedded. There are sulfides to 11.1m as disseminated pyrite possible sphalerite, fine laminae of pyrite and minor cubes. The unit is foliated at 43° to core axis. 11.1-11.6-coarser crystal tuff section with grains of feldspars to 1mm, white. Possible porphyritic tuff	8097	10.0	11.0	1.0	67	136	69	0.3	12
14.5	15.8	Mafic Tuff-Sediment -fine grained, dark green to pale green in thin beds well developed at 51° to core axis. There is minor calcite carbonate in small veinlets to 0.4mm.									
15.8	32.6	Mafic Dyke -medium grained, dark green grey with lighter green saussauritized feldspars. The upper contact is broken to									

Diamond Drill Log

Hole # EAG00-9

		Assays									
From	To	Description	Sample #	From	To	Length (meter)	Cu ppm	Zn ppm	Pb ppm	Ag ppm	Au ppb
		crushed with unit fine grained for 0.5m. As in other holes where this dyke has been encountered the dyke is magnetic moderately to strongly with visible magnetite grains. The dyke is massive generally featureless becomes coarser in the centre, fine grained at lower contact 40cm. The lower contact is 42° to core axis. Parallel to lamination in lower unit. Maybe a sill parallel to stratigraphy. The unit is possibly gabbro.									
32.6	40.3	Mafic Tuff/Magnetite Iron formation -fine grained, dark green mafic tuff sediment, bedded with magnetite rich layers and lesser amounts of chert bands. This is a lean iron formation with sections of pyrite as concretion localized laminae as fine grains of pyrite. The unit is garnetiferous with pale pinkish garnets stretched along foliations/bedding. The garnets occur in chloritic layers and increase in frequency down section. Bedding foliations at 51° to core axis.									
40.3	51.1	Intermediate to Mafic Volcanics -fine to medium grained medium to dark green, chloritic, calcite veinlets to laminae locally abundant. Unit is foliated to near schistose over up to 2m sections becoming weakly to moderately laminated towards end of section. Foliation at 59° to core axis. Lower contact at 35° to core axis. Sulfides nil to trace.									
51.1	69.7	Mafic Dyke -as above, with magnetite. This dyke has nodules of calcite towards lower section below 60.0m. Contact areas are again fine grained for 60cm. Calcite fillings of fractures near lower contact. Lower contact at 40° to core axis.									
69.7	88.6	Chert/Magnetite Iron Formation -fine grained, dark green to black to pale green epidote green, laminations to beds. The unit consists of green tuff, grey chert, and magnetite rich beds to massive magnetite. The unit is generally thinly bedded <5cm	8098	69.7	70.9	1.2	161	250	14	0.3	60
			8099	70.9	72.0	1.1	492	1460	20	1.2	10
			8100	72.0	73.1	1.1	384	1860	41	1.0	36
			8122	73.1	74.6	1.5	405	2880	37	0.8	103
			8101	86.5	87.6	1.1	166	127	1	0.5	15

Diamond Drill Log

Hole # EAG00-9

			Assays								
From	To	Description	Sample #	From	To	Length (meter)	Cu ppm	Zn ppm	Pb ppm	Ag ppm	Au ppb
		but up to 10cm. There are sulfides of pyrrhotite as massive laminae to veinlets up to 8cm long as at 71.9m. Chalcopyrite is associated with pyrrhotite but is random scattered grains to rarely clusters as at 71.9m. Pyrite is random less abundant than the pyrrhotite as clusters and rare discontinuous veinlets. The bedding is at 49° to core axis. There is a 25cm graphite rich band at the lower contact 88.35-88.6m (25cm) with 10-15% pyrrhotite, minor pyrite.	8123	87.6	88.6	1.0	162	556	1	0.4	19
88.6	97.8	Intermediate to Felsic Volcanic -fine to medium grained, light to medium grey green, massive to moderately foliated with pale green carbonate/sericite local chlorite and minor biotite associated with small quartz vein. There is a cherty layer, dark grey 95.5-96.5m with 5-8% pyrite on foliations. Foliations at 46° to core axis (laminations) unit is a tuff.	8102	95.5	96.5	1.0	35	100	1	0.2	12
97.8	103.5	Felsic Pyroclastic-Breccia -fine grained, light grey green matrix supporting coarse chert breccia fragments. The unit is sericitic, locally has a "layered" appearance, alignment of fragments on the foliations. Sulfides are nil to trace pyrite, pyrrhotite. Foliations 56° to core axis.									
103.5	110.8	Chert/Sulfide/Graphite -fine grained, dark green tuffaceous layers, medium grey chert and dark grey to black graphite. The sulfides are pyrrhotite, pyrite, sphalerite galena, chalcopyrite in decreasing order. The best mineralization occurs in the centre of the unit where there is increased graphite. 103.5-106.6-chert with 10% tuffaceous layers; 2-5% pyrrhotite, 1-2% pyrite. The section is graphitic at upper contact 40cm with pyrrhotite 8-10%. 106.6-107.8-graphitic tuff, graphite, minor white quartz, sphalerite as coarse knots, fine laminae and cluster accumulations. Minor chalcopyrite, galena is 1% in upper 40cm.	8103	103.5	104.5	1.0	109	740	14	1.0	19
			8104	104.5	105.6	1.1	30	28	1	0.1	7
			8105	105.6	106.6	1.0	57	961	101	0.2	nil
			8106	106.6	107.8	1.2	364	27800	9880	2.2	34

Diamond Drill Log

Hole # EAG00-9

							Assays				
From	To	Description	Sample #	From	To	Length (meter)	Cu ppm	Zn ppm	Pb ppm	Ag ppm	Au ppb
		107.8-110.9-chert, 30% tuff sulfides are mainly pyrrhotite, scattered sphalerite, section graphitic towards end of section sulfides increase.	8107	107.8	108.5	0.7	23	4680	1460	0.2	nil
			8108	108.5	109.5	1.0	44	636	279	0.4	14
			8109	109.5	110.8	1.3	127	2730	1670	0.8	15
110.8	124.4	Chert/Tuffaceous Sediments -fine grained, pale green to creamy to medium green grey tuff, interbedded with medium grey chert. Locally the section appears brecciated. There are only minor magnetite rich layers. Sulfides are generally pyrrhotite minor as discontinuous massive veinlets. The tuff portion maybe sericitic.									
124.4	136.4	Chert/Sulfide/Graphite Iron Formation -fine grained, medium grey chert, becoming increasingly tuff dominated below 128.0m dark grey to blackish in increased graphite and pale green grey. Sulfides are pyrrhotite, pyrite, sphalerite minor galena, chalcopyrite. Sphalerite occurs as coarse fracture fillings, fine laminae and clusters. Galena as small grains, minor. Chalcopyrite was noted in some pyrrhotite sections. 124.4-132.1-pyrrhotite 5-8% with local 10%, minor graphite. 132.1-133.0-chert with fracture filling sphalerite, 3-5% 133.0-135.0-chert tuff minor sulfides of pyrrhotite, pyrite, minor sphalerite. 135.0-136.4-chert/tuff with pyrrhotite, sphalerite as clusters laminae increasing down section to 8%. Graphite layer at 136.1-136.3m.	8110	124.4	126.0	1.6	90	1040	122	1.4	45
			8111	126.0	127.5	1.5	73	85	8	0.4	10
			8112	127.5	129.0	1.5	58	120	5	0.6	17
			8113	129.0	130.5	1.5	67	33	4	0.5	12
			8114	130.5	132.1	1.6	80	595	327	0.5	9
			8115	132.1	133.0	0.9	104	33600	6880	2.2	14
			8116	133.0	134.0	1.0	54	102	104	0.8	7
			8117	134.0	135.0	1.0	158	5620	1870	1.2	12
			8118	135.0	136.4	1.4	225	5590	1490	1.3	10
136.4	150.9	Intermediate to Mafic Volcanic -fine grained, light to medium grey green. The unit is highly foliated to near schistose locally laminated. Unit is probably a fine tuff. There are abundant calcite veinlets to laminae parallel to foliations. There is a biotite rich layer at 144.6-146.1m. Chert occurs in small layer at 147.2-147.7m with pyrite, pyrrhotite, minor sphalerite. The lower contact is a chert layer noted below. Foliations are at 71° to core axis.	8119	147.2	147.7	0.5	283	107	16	0.4	7
			8120	148.7	149.9	1.2	345	972	1	0.4	21
			8121	149.9	150.9	1.0	311	423	1	0.3	24

Diamond Drill Log

Hole # EAG00-9

Assays											
From	To	Description	Sample #	From	To	Length (meter)	Cu ppm	Zn ppm	Pb ppm	Ag ppm	Au ppb
150.9	156.6	148.7-150.9-chert sulfide layer with pale green tuff on minor magnetite layers. Pyrrhotite is 5-8% as massive veinlets and clots. Mafic Volcanic -fine grained, medium to dark green, probable flow with foliation to locally near schistose. There are calcite/quartz calcite veinlets as above and as clots. 156.6 End of Hole Acid Tests 102m -34° 150m -31°									

Work Report Summary

Transaction No: W0160.30294 Status: APPROVED
 Recording Date: 2001-JUN-14 Work Done from: 1999-JUN-19
 Approval Date: 2001-AUG-22 to: 2000-JUN-15

Client(s):
 134260 GAGNE, MICHAEL YVON
 134329 GAGNE, YVON MICHAEL

Survey Type(s):
 ASSAY PDRILL

Work Report Details:

Claim#	Perform	Perform Approve	Applied	Applied Approve	Assign	Assign Approve	Reserve	Reserve Approve	Due Date
P 1217741	\$35,599	\$35,599	\$0	\$0	\$12,000	12,000	\$23,599	\$23,599	2002-OCT-02
P 1225050	\$0	\$0	\$6,000	\$6,000	\$0	0	\$0	\$0	2002-JUN-17
P 1225051	\$10,569	\$10,569	\$4,800	\$4,800	\$0	0	\$5,769	\$5,769	2002-JUN-17
P 1225054	\$0	\$0	\$6,000	\$6,000	\$0	0	\$0	\$0	2002-JUN-17
	\$46,168	\$46,168	\$16,800	\$16,800	\$12,000	\$12,000	\$29,368	\$29,368	

Status of claim is based on information currently on record.



41009SE2007 2.21585 HUFFMAN

900

Date: 2001-AUG-23

GEOSCIENCE ASSESSMENT OFFICE
933 RAMSEY LAKE ROAD, 6th FLOOR
SUDBURY, ONTARIO
P3E 6B5

MICHAEL YVON GAGNE
P.O. BOX 807
SOUTH PORCUPINE, ONTARIO
P0N 1H0 CANADA

Tel: (888) 415-9845
Fax: (877) 670-1555

Submission Number: 2.21585
Transaction Number(s): W0160.30294

Dear Sir or Madam

Subject: Approval of Assessment Work

We have approved your Assessment Work Submission with the above noted Transaction Number(s). The attached Work Report Summary indicates the results of the approval.

At the discretion of the Ministry, the assessment work performed on the mining lands noted in this work report may be subject to inspection and/or investigation at any time.

If you have any question regarding this correspondence, please contact BRUCE GATES by email at bruce.gates@ndm.gov.on.ca or by phone at (705) 670-5856.

Yours Sincerely,



Ron Gashinski
Supervisor, Geoscience Assessment Office

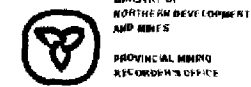
Cc: Resident Geologist

Michael Yvon Gagne
(Claim Holder)

Yvon Michael Gagne
(Claim Holder)

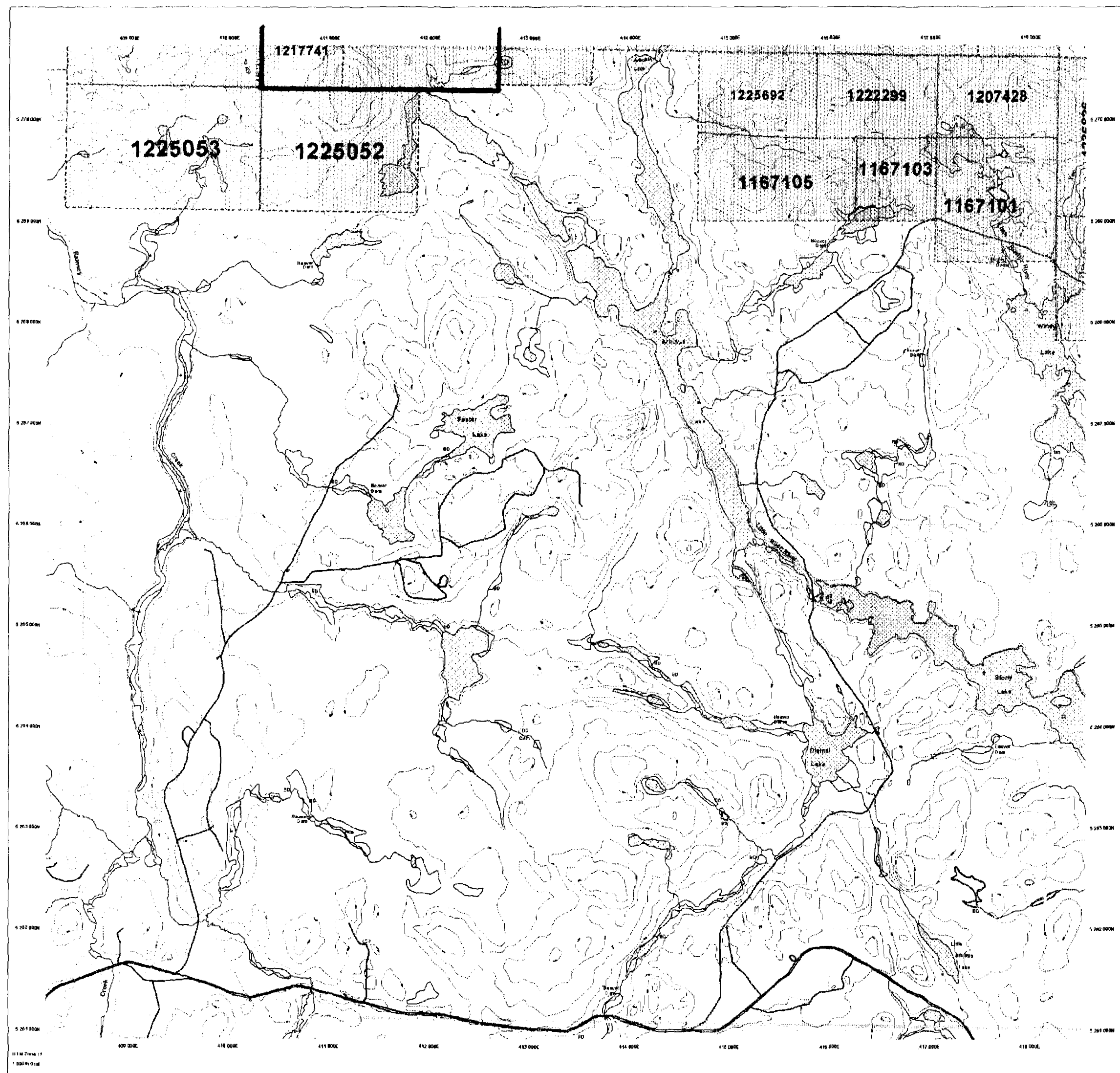
Assessment File Library

Michael Yvon Gagne
(Assessment Office)



**MINING LAND TENURE
MAP**

Date / Time of Issue Aug 31 2001 08:30h Eastern
TOWNSHIP / AREA PLAN
ARBUTUS G-2483
ADMINISTRATIVE DISTRICTS / DIVISIONS
Mining Division Porcupine
Land Titles/Registry Division SUDBURY
Ministry of Natural Resources District CHAPLEAU



TOPOGRAPHIC

- Administrative Boundary
- Township
- Carleton Place
- Provincial Park
- Water Feature
- Contour
- Contour - Approx. Accuracy Dependent
- Trail
- Highway
- Road
- Trail
- Natural Gas Pipeline
- Hydro Line
- Communication Line
- Proposed Area
- Boundary of Mineral Field (Mineral Lease)

LAND TENURE

- Formal Patent
 - Surface And Mining Rights
 - Surface Rights Only
 - Mining Rights Only
- Leasehold Patent
 - Surface And Mining Rights
 - Surface Rights Only
 - Mining Rights Only
- License of Occupation
 - Surface And Mining Rights
 - Surface Rights Only
 - Mining Rights Only
- Leasehold Patent
 - Leasehold Patent
 - Order in Council
 - Water Point Lease Agreement
 - Mining Claim

LAND TENURE WITHDRAWALS

- Area Withdrawn From Disposition
 - Mining Act Withdrawal Types
 - W1a Surface and Mining Rights Withdrawal
 - W1b Surface Rights Only Withdrawal
 - W1c Mining Rights Only Withdrawal
 - W1d Order in Council Withdrawal Type
 - W1e Surface and Mining Rights Withdrawal
 - W1f Surface Rights Only Withdrawal
 - W1g Mining Rights Only Withdrawal

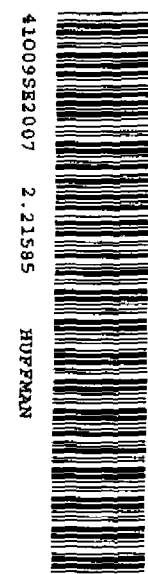
IMPORTANT NOTICES

LAND TENURE WITHDRAWAL DESCRIPTIONS

IMPORTANT NOTICES

Areas under which digital registration, land status or conditions could affect mineral prospecting, mining and mineral development activities.

2.21585
ASSAY
PDRILL



200

This map is an information product of the Ministry of Northern Development and Mines. It is not intended for use as a legal document. The information shown on this map is derived from various sources and is not guaranteed to be accurate. Additional information may be available through the local Land Titles or Registry Office or the Ministry of Natural Resources. The information shown is derived from digital data available in the Provincial Mining Records Office.

General Information and Limitations

Contact Information:
Provincial Mining Records Office | 1-800-387-3444
7990 Campbell Road, Toronto | 1-800-943-3444

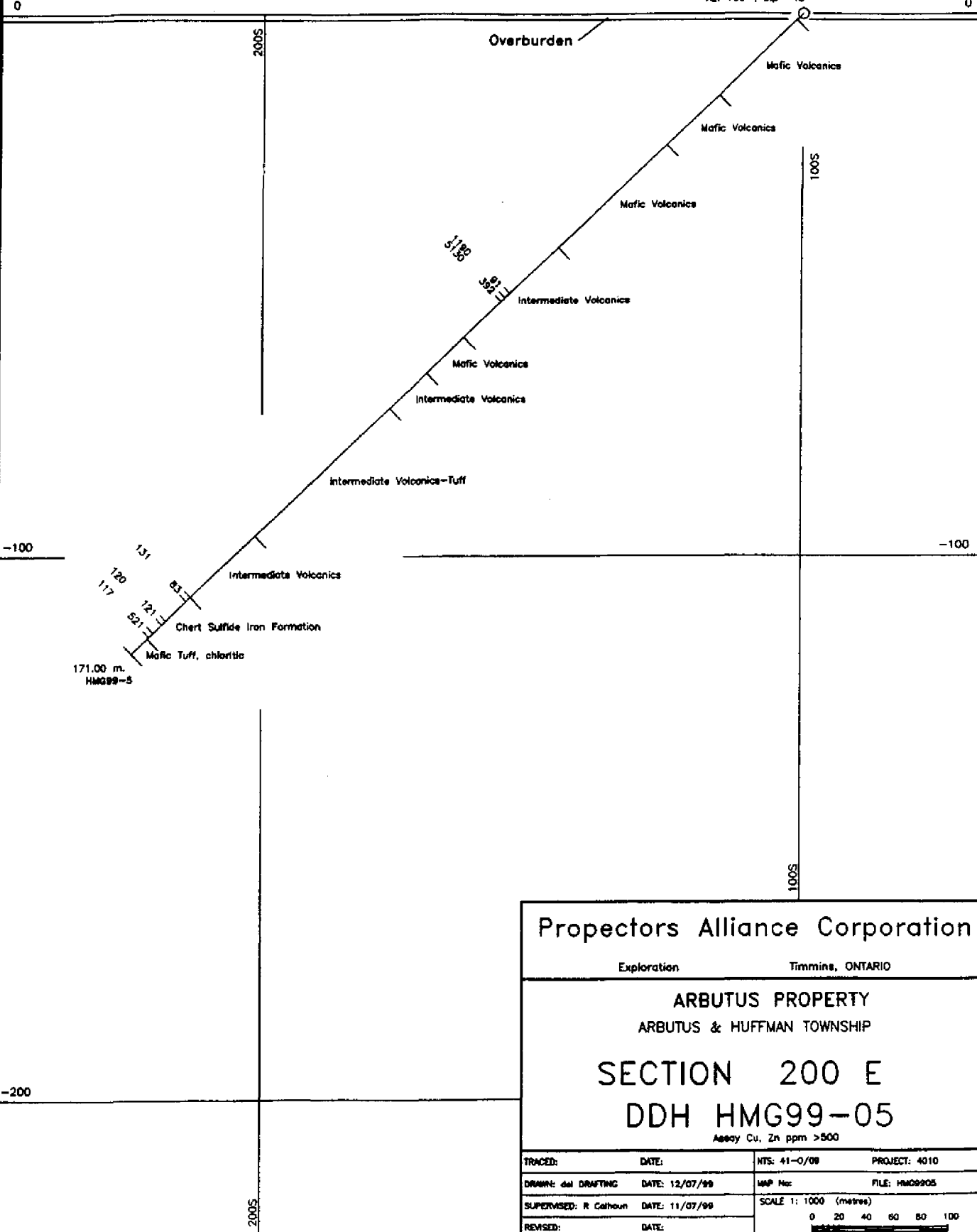
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Drawing Date: 08/31/2001

This map is an information product of the Ministry of Northern Development and Mines. It is not intended for use as a legal document. The information shown on this map is derived from various sources and is not guaranteed to be accurate. Additional information may be available through the local Land Titles or Registry Office or the Ministry of Natural Resources. The information shown is derived from digital data available in the Provincial Mining Records Office.

1217741

Az. 180°

HM99-05
200mE, 100mS
Az. 180°, Dip -45°



410095E2007 2.21585



HUFFMAN

220

Proectors Alliance Corporation

Exploration Timmins, ONTARIO

ARBUTUS PROPERTY
ARBUTUS & HUFFMAN TOWNSHIP

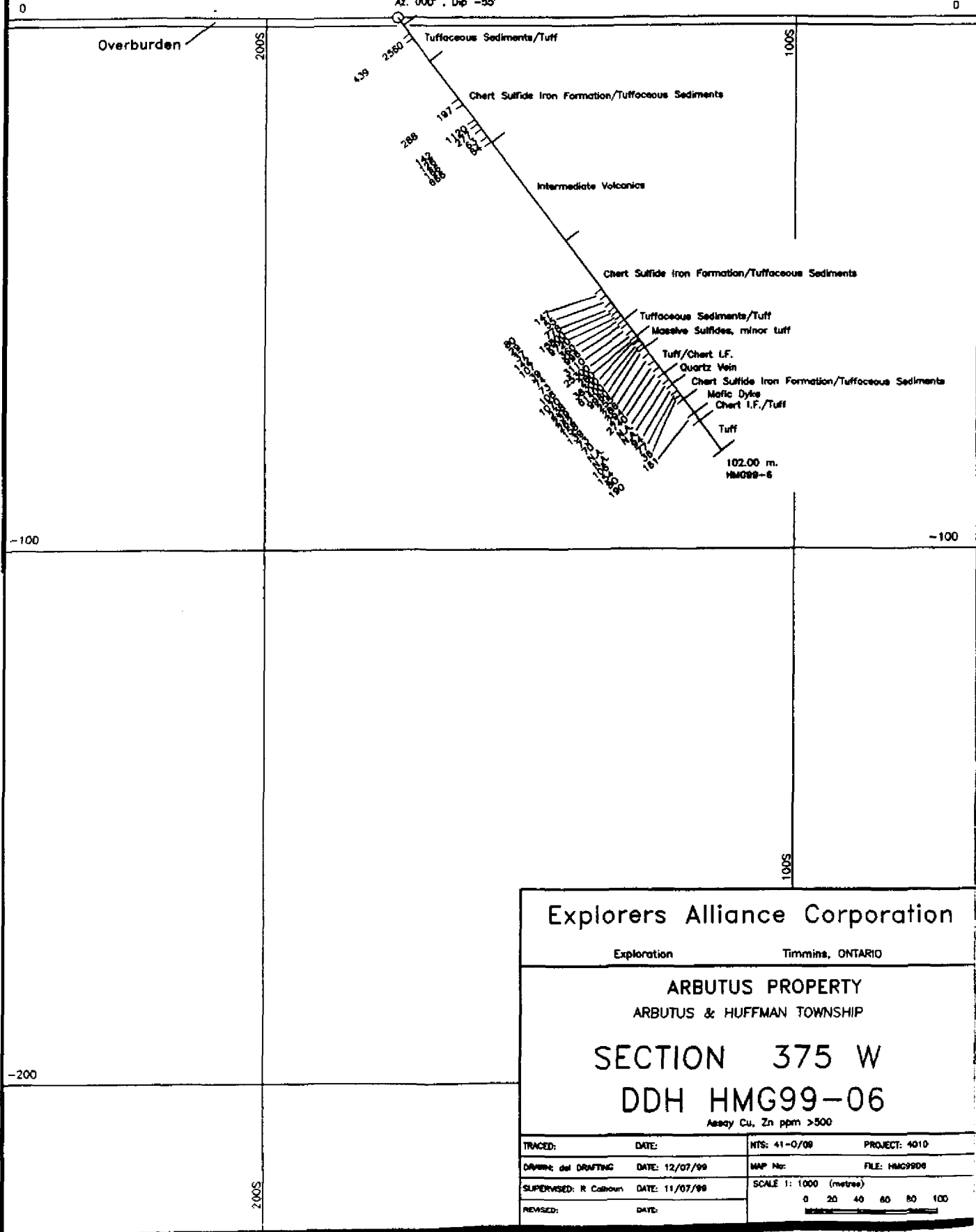
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DDH HMG99-05
Assay Cu, Zn ppm >500

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SUPERVISED: R Calhoun	DATE: 11/07/99	SCALE 1: 1000 (metres)	
REVISED:	DATE:	0 20 40 60 80 100	

Az. 000°

1217741

HM99-06
375mW - 175mS
Az. 000° , Dip -55°



4100982007 2.21585 HUFFMAN 230

Explorers Alliance Corporation

Exploration Timmins, ONTARIO

ARBUTUS PROPERTY

ARBUTUS & HUFFMAN TOWNSHIP

SECTION 375 W

DDH HMG99-06

Assay Cu, Zn ppm >500

TRACED:	DATE:	NTS: 41-0/00	PROJECT: 4010
DRAWN: del DRAFTING	DATE: 12/07/99	MAP No:	FILE: HMG9906
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REVISED:	DATE:	0 20 40 60 80 100	



41009SE2007

2.21585

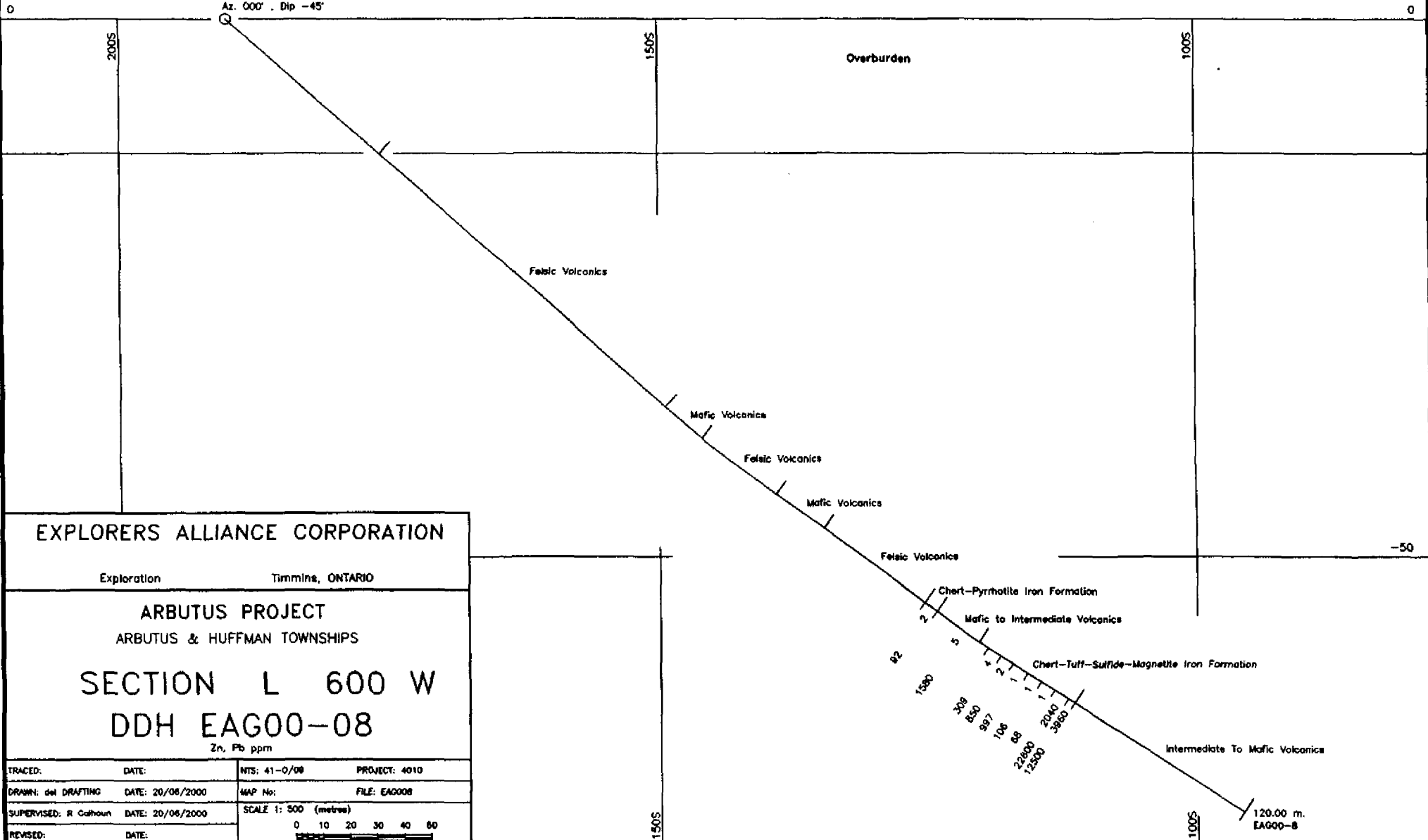
HUFFMAN

240

1217741

Az. 000°

EAG00-08
190mS, L 600 W
Az. 000°, Dip -45°



EXPLORERS ALLIANCE CORPORATION

Exploration

Timmins, ONTARIO

ARBUTUS PROJECT

ARBUTUS & HUFFMAN TOWNSHIPS

SECTION L 600 W

DDH EAG00-08

Zn, Pb ppm

TRACED:	DATE:	NTS: 41-0/08	PROJECT: 4010
DRAWN: del DRAFTING	DATE: 20/06/2000	MAP No:	FILE: EAG008
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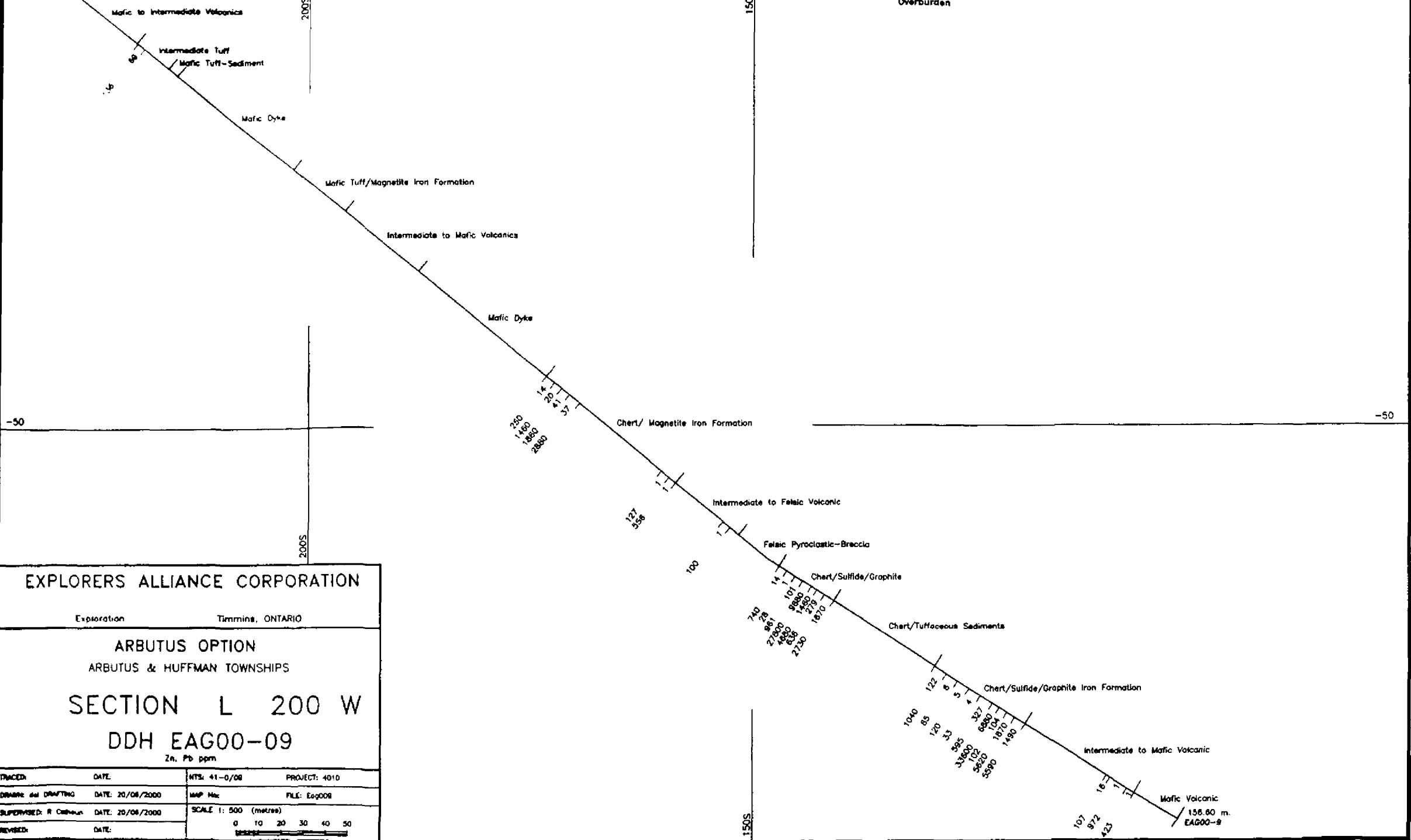
EAG00-09

227mS . L 200 W
Az. 000° . Dip -45°

Az. 000°

1217741

0



EXPLORERS ALLIANCE CORPORATION

Exploration Timmins, ONTARIO

ARBUTUS OPTION

ARBUTUS & HUFFMAN TOWNSHIPS

SECTION L 200 W

DDH EAG00-09

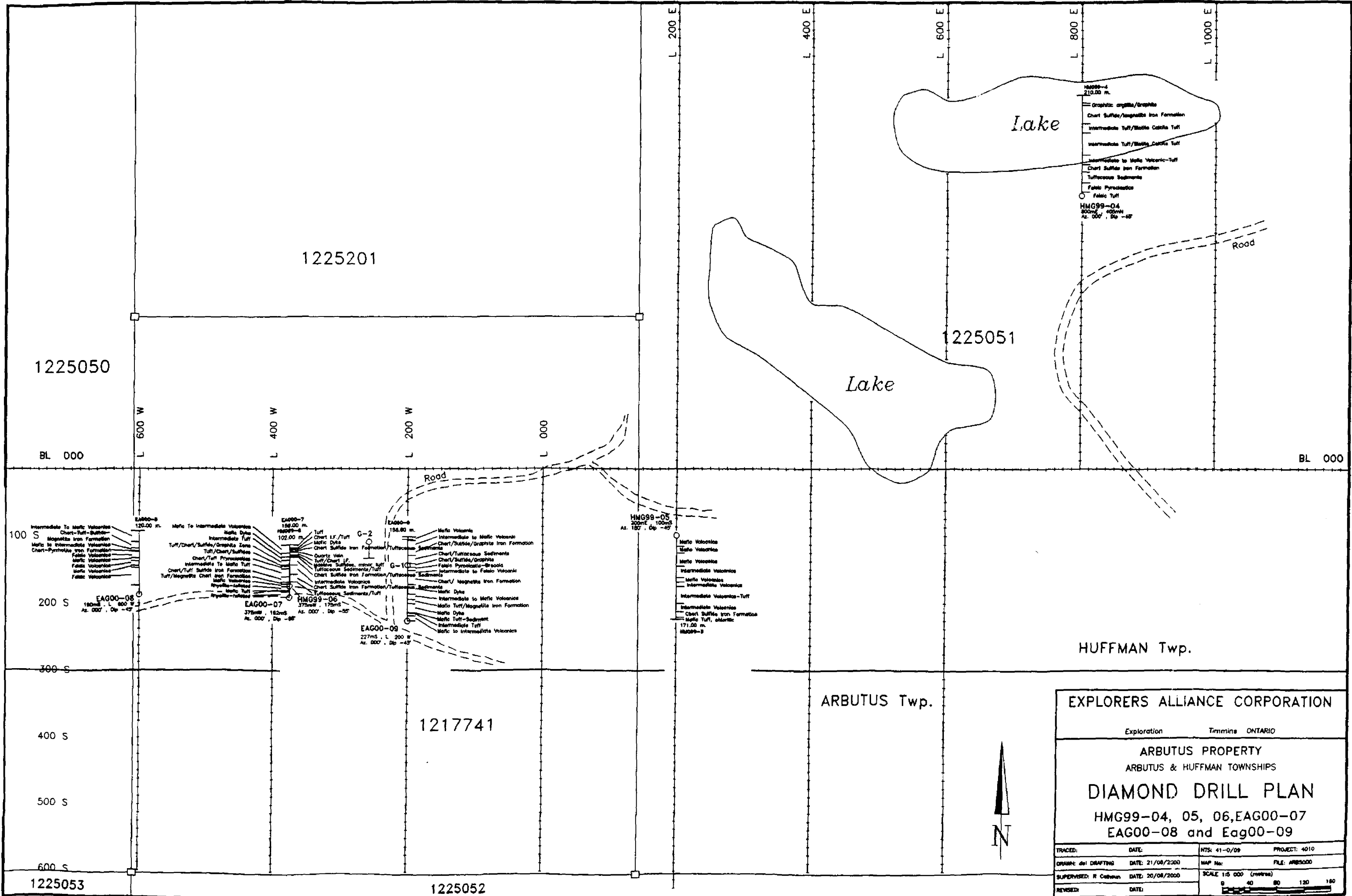
Zn, Pb ppm

TRACED	DATE	NTS: 41-0/08	PROJECT: 4010
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SUPERVISED BY: R. Cuthbert	DATE: 20/08/2000	SCALE 1: 500 (metres)	
REVISED:	DATE:	0 10 20 30 40 50	

41009SE2007 2.21585

HUFFMAN

250



EXPLORERS ALLIANCE CORPORATION

Exploration Timmins ONTARIO

ARBUTUS PROPERTY
ARBUTUS & HUFFMAN TOWNSHIPS

DIAMOND DRILL PLAN
HMG99-04, 05, 06, EAG00-07
EAG00-08 and EAG00-09

TRACED:	DATE:	NTS: 41-0/09	PROJECT: 4010
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SUPERVISED: R Colburn	DATE: 20/08/2000	SCALE 1:5 000 (metres)	
REVISED:	DATE:		

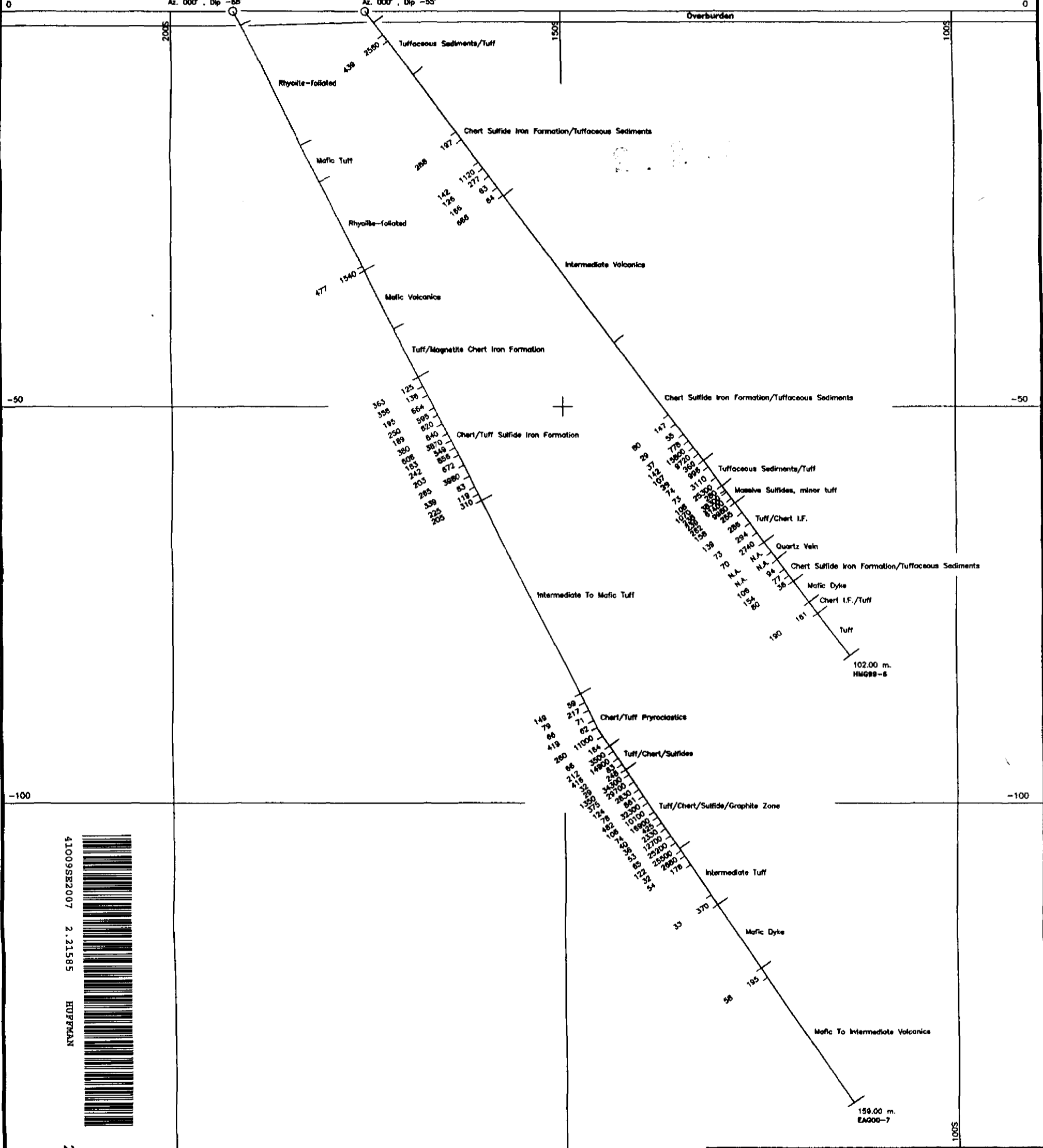


Az. 000°

1217741

EAG00-07
375mW, 192mS
Az. 000°, Dip -66°

HMG99-06
375mW, 175mS
Az. 000°, Dip -55°



-50

-50

-100

-100

-150

-150



EXPLORERS ALLIANCE CORPORATION

Exploration Timmins, ONTARIO

ARBUTUS OPTION
ARBUTUS & HUFFMAN TOWNSHIPS

SECTION 375 W
DDH HMG99-06 & EAG00-07

Cu, Zn ppm

TRACED:	DATE:	NTS: 41-0/09	PROJECT: 4010
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REVISED:	DATE:		