Report on surveying of drill hole collars in the areas of the Upper Johnson and Campbell Veins and cross section evaluation of the Upper Johnson Veins

East Lake Ainslie, Inverness County, Nova Scotia

Acadian Mining Corporation

License 07099

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Summary

The following report documents a geographic survey of diamond drill hole collars and other relevant point data related to the barite veins in the East Lake Ainslie area and an evaluation of the veins by cross section analysis. All historic diamond drill holes and other relevant points were located on the ground in preparation for surveying and surveying was completed using Trimble Pro XR GPS.

Historic diamond drill hole logs for the Upper Johnson Vein were captured in digital format and, using the newly acquired collar coordinates, cross sections were produced using MapInfo and Discover software. The results provide an accurate framework from which to access the character of the barite veins. The veins are hosted within fault structures and vary in thickness both along strike and down dip. It was previously recognized from drill logs that the Upper Johnson Vein consisted of more than one vein and was subdivided into the Upper Johnson South Vein and the Upper Johnson North Vein. The complex character of the Upper Johnson Vein is apparent in cross sections, which shows the mineralization to be dispersed in two main zones corresponding to the Upper Johnson South Vein and Upper Johnson North veins. However, the dip and strike extension of the veins is discontinuous, likely reflectring the character of the brittle fault structures hosting the mineralization. Additions veins of barite-fluorite mineralization are recognized in drill core to the north and south of the Upper Johnson vein, indication the potential for identifying additional veins in the area.

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1.0 – Introduction

Several exploration programs and evaluations of the barite veins in the East Lake Ainslie area have been completed in the past, including a recent compilation by Acadian Mining. It has been recognized that the barite veins occupy fault structures and that the mineralization commonly varies in width both along strike and down dip. Recent evaluation of the Upper Johnston vein suggests that, in contrast previous reports, more than one parallel veins are defined in the drilling. A lack of precise co-ordinates for drill collars has restricted the development of accurate cross sections where the character of the veins can be fully evaluated.

This report documents the results of a geographic survey program which established accurate coordinates for drill collars and other relevant point data in the areas of the Upper Johnson, Campbell and MacMillian Veins. In addition, the drill hole data for the Upper Johnson Vein has been evaluated in a series of cross section.

2.0 - Location and Access

The Lake Ainslie property is located on the east side of Lake Ainslie in Inverness County (Figs 1,2). The property is approximately 150 kilometres from Sydney and 80 kilometres from Port Hawkesbury. The Johnson Vein System is located approximately 1.5 kilometres north of the Trout River Bridge and 800 metres east of Route # 395 (Route # 395 meets the Trans Canada Highway 20 kilometres south of the site). Access for the current work program was obtained from the landowners north of the Upper Johnson site, and on whose land a roadway known as the "North Inverness Forest Management Road" had been constructed several years ago (Fig. 2). This roadway intersects Route # 395 north of the Presbyterian Church and winds its way up Johnson Mountain. Two small woods roads were built, from the Forest Management Road, to provide access for drilling the Upper Johnson Vein.

The Campbell Vein is located on the western side of Bald Mountain, a prominent topographical feature on the east side of Lake Ainslie. The vein is accessible via a woods road that leaves Route # 395 approximately 3.5 kilometres north of the Trout River bridge. The woods road is located on the east side of Route #395 opposite Macdougall Lane. The Campbell Vein is located about 400 -450 metres in along this road. The Macmillan Vein can be reached by way of a woods road that meets Route # 395 about 0.5 kilometres north of the Campbell Vein access road, and is drivable to the top of Bald Mountain. This road is about 1 kilometre long and the Macmillan vein is located about 150 metres below the summit of Bald Mountain.

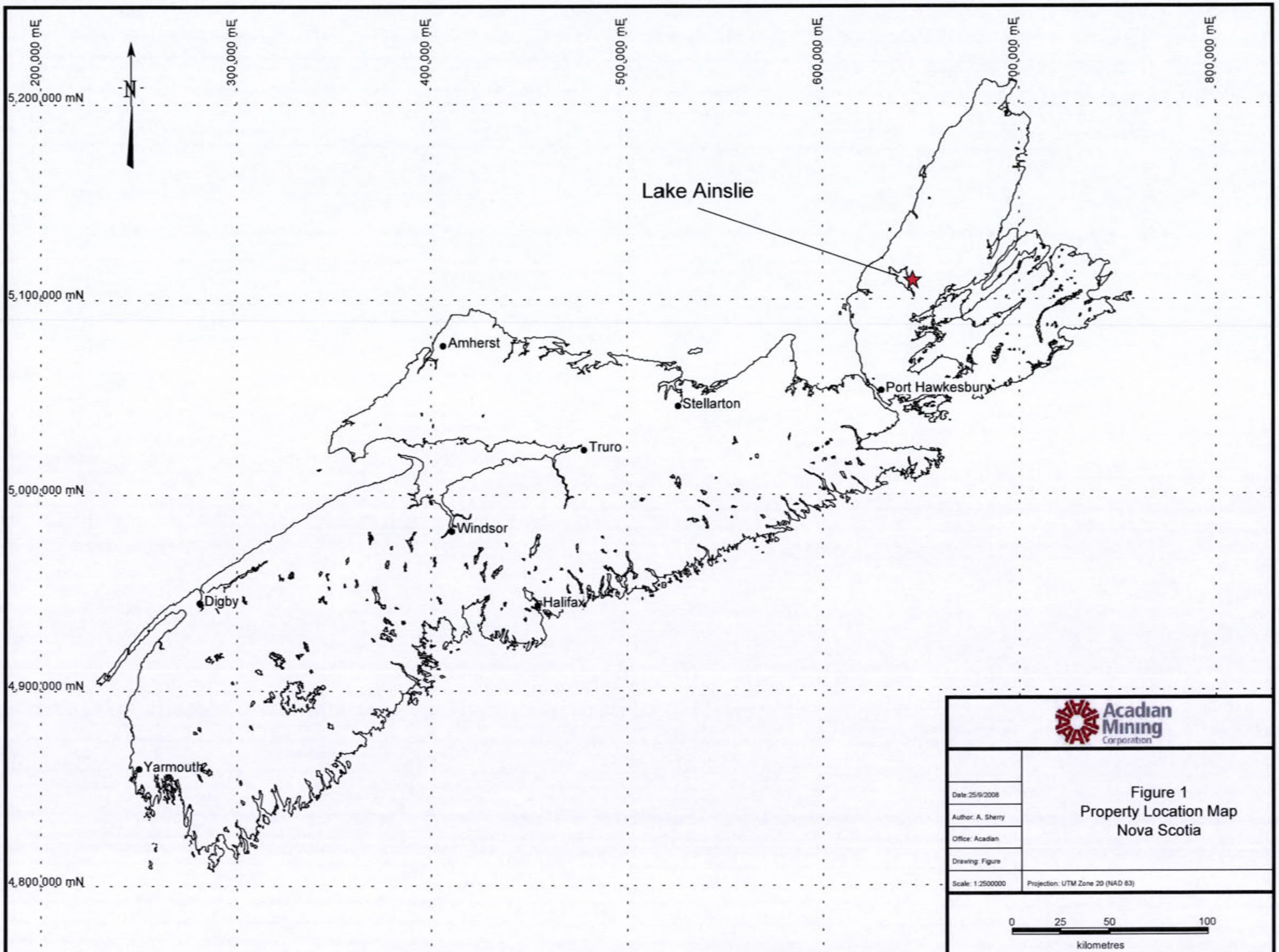

Figure 1
Property Location Map
Nova Scotia

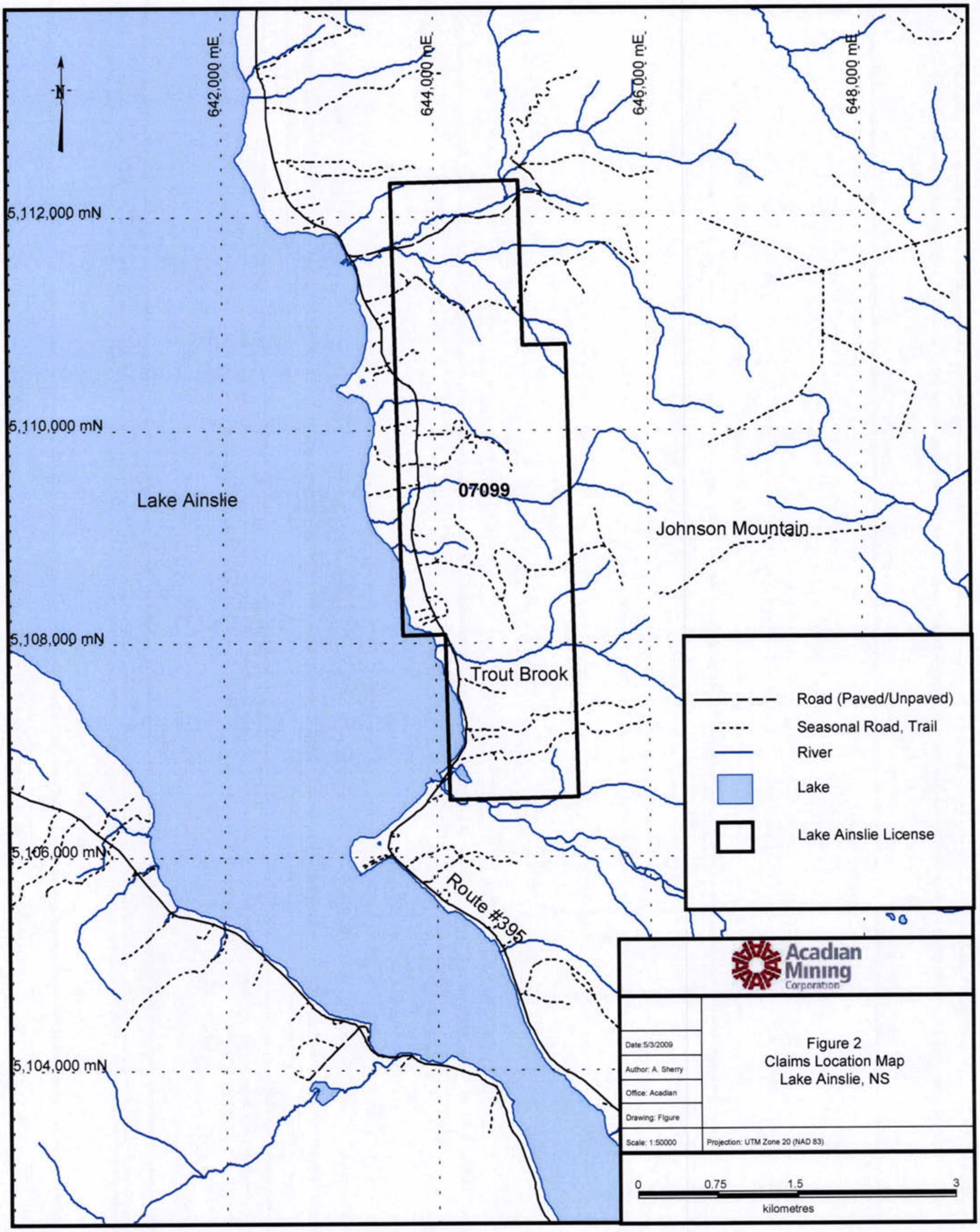

Figure 2
Claims Location Map
Lake Ainslie, NS

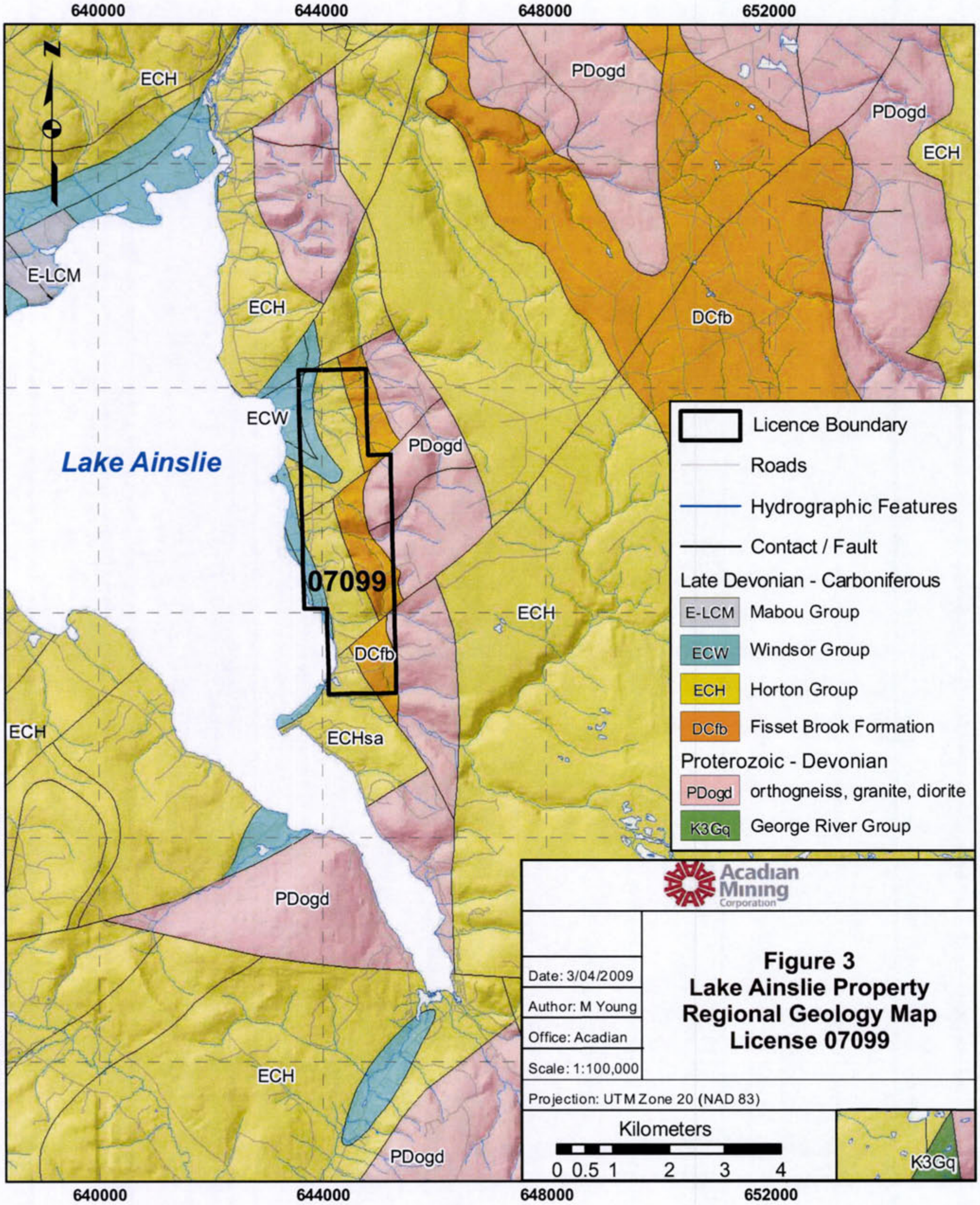

Figure 3
Lake Ainslie Property
Regional Geology Map
License 07099

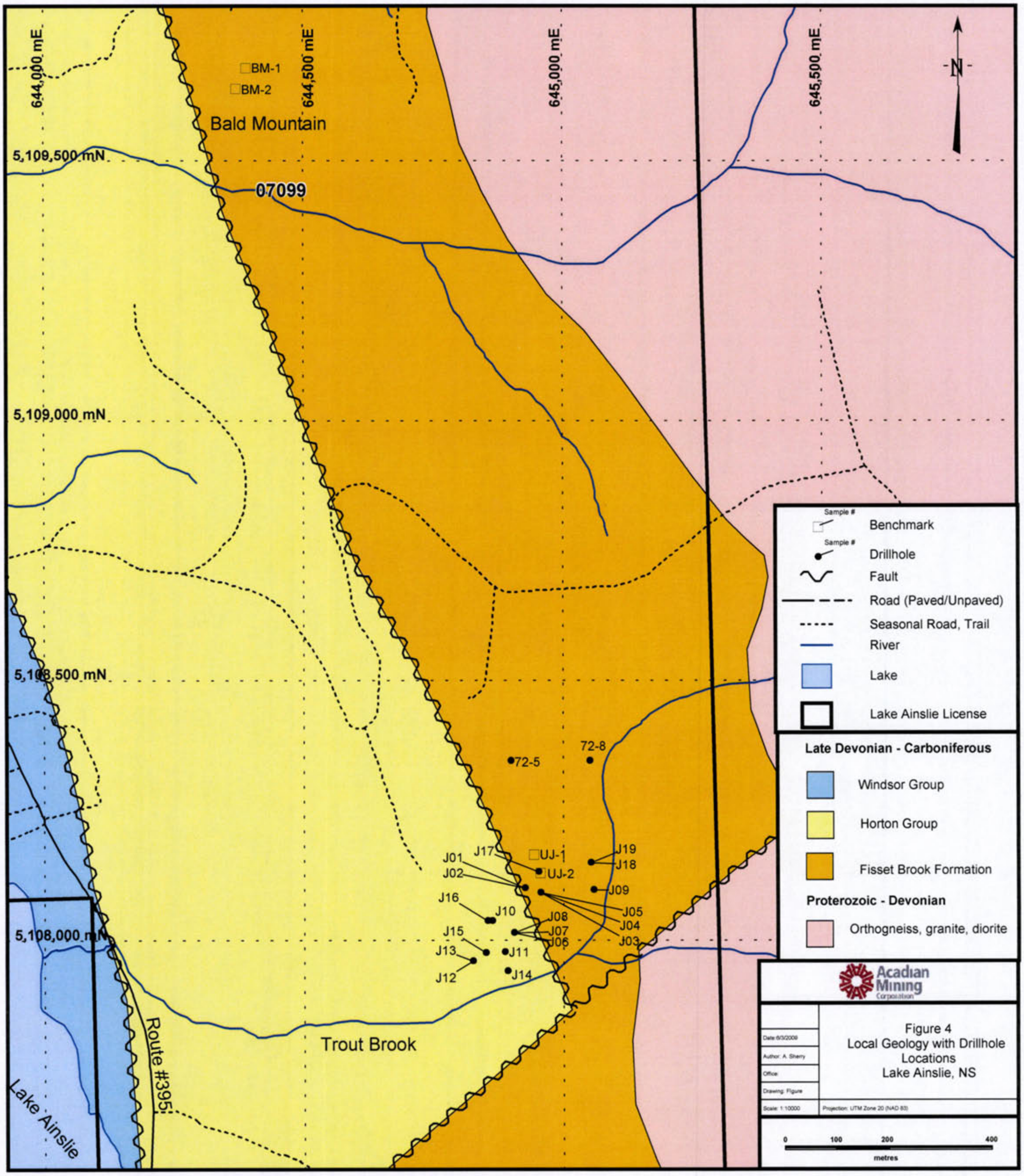

Figure 4
Local Geology with Drillhole Locations
Lake Ainslie, NS

3.0 - Licence Tabulation

The Lake Ainslie property consists of 52 contiguous mineral exploration claims held under licence 07099 by Acadian Mining Corporation (Acadian). Upon review of the property Acadian will renew all 52 of the mineral exploration claims comprising Exploration licence 07099. A detailed tabulation of the claims is provided below (Table 1).

Table 1: Claims Information Pertaining to Licence 07099

Licence #	Claims	Tract	NTS Sheet
07099	ABGHJKPQ	90 ✓	11 K 03 A
	DEMN	91 ✓	11 K 03 A
	DEMN	102 ✓	11 K 03 A
	ABCFGHJKLOPQ	103 ✓	11 K 03 A
	DEM	6 ✓	11 K 03 D
	ABCFGHJKLOPQ	7 ✓	11 K 03 D
	ABCFGHJKL	18 ✓	11 K 03 D

4.0 Climate and Physiography

The climate at Lake Ainslie is typical of the inland region of Cape Breton Island with warm summer weather and cold winter weather with occasional extreme snowfall. The nearest Environment Canada Weather Station is at Sydney. The mean monthly temperatures at this station between 1941 and 1990 ranged from -6.5°C in February to 17.6°C in July. Extreme minimum temperatures for these months were -25.6°C and 2.2°C, respectively. The average precipitation over the Cape Breton Highlands is 1600mm with 300cm of snowfall in an average year. Snow cover varies from very little in many years to occasional winters of deep (1+ metres) snow cover.

Lake Ainslie is a large fresh water lake about 58 metres above sea level. From its eastern shore the land rises gently for about one kilometre, and then steepens until it reaches a peneplain surface 245-310 metres above sea level. The plateau is cut by numerous V-shaped valleys and is modestly well wooded. Till cover is thin a discontinuous veneer less than 2 metres thick and is typically sandy and stony. The lowland adjacent to Lake Ainslie is open fields with modest cultivation.

5.0 - Previous Work

It is not known exactly when the Upper Johnson Vein was discovered, but it was probably in the 1930's or 1940's. The first drilling was done in 1955, when two flat holes (725') were drilled near the bottom of Johnson Hill. One of these holes, 1954-45 (Fig. 5), intersected the Upper Johnson and a couple of narrow unnamed veins.

In 1965 Consolidated Mogul Mines Ltd commenced a program of surface mapping, sampling of old trenches and drilling on the Upper Johnson Vein system. This program included 14 drill holes (J1-J14; Fig. 5) totalling 7051 feet (2150 metres). One of these holes (J-5) was drilled to intersect the Lower Johnson Vein. Ore reserves for the Upper Johnson Vein were estimated in 1969 to be 734 800 tons grading 55.40% barite and 17.50% fluorite (Johnson, 1969).

In 1972, Conwest undertook an exploration program in the vicinity of the Upper Johnson. They drilled two holes (72-1, 72-2; Fig. 5) and extended drill hole J-13 for a total of 1951 feet (594.8 m) of drilling. In addition to the drilling, Conwest did extensive trenching about 600 feet (182 metres) north of the Upper Johnson resulting in the discovery of the "Conwest Vein" (Fig. 4).

In 2003, Atlantic Industrial Minerals conducted an extensive exploration program on the Upper Johnson Vein and the area near the Conwest trenches. This program included 5 drill holes (J15 – J19; Fig. 5) for a total of 525 metres. In addition, four trenches for a total length of 362 metres were excavated on or near the Conwest Vein . The trenches were excavated just south of drill hole 72-5 and uncovered numerous discontinuous stringers veins of barite and fluorite. One barite vein, thought to be the Conwest Vein, was exposed for about 70 metres. It varied in width from 2.7 metres to just a stringer, with an average width of 0.75 metres. The attitude of this vein was quite variable. At the eastern end it was 0.30 metres, striking about 070° and dipping 80° north. On the western end of the trench, the vein was 1.0 metres wide, striking approximately 095° and dipping 50° north. The area of these trenches corresponds with the area designated a "stringer zone" on the section drill hole 72-5.

6.0 - Regional Geology

The rocks along the east side of Lake Ainslie range in age from Pre-Cambrian to late Carboniferous and are part of a north-south trending anticline. The crest of the anticline has been eroded to expose the Pre-Cambrian metamorphic rocks and Devonian intrusive rocks (Fig. 3), both of which form the basement for the Carboniferous rocks.

George River Group

The George River Group is of Pre-Cambrian age and consists of thick sequences of meta-sedimentary and meta-volcanic rocks. The sedimentary units comprise a thick series of limestones and dolomites at the base with volcanic rocks and an upper quartzite unit. In the East Lake Ainslie area the George River Group is represented by gneisses and meta-sediments. In the area of the Johnson Vein, the George River Group represents basement rocks and do not host barite veins. Further north, near Scotsville, the George River group does host barite veins.

Intrusive Rocks

Intrusive rocks in the East Lake Ainslie area consist of granite, diorite and orthogneis of Proterozoic to Devonian age (Fig. 3). They are not known to host barite veins, and are unconformably overlain by the Fisset Brook Formation.

Late Devonian-Carboniferous rocks

The Fisset Brook Formation outcrops in a northerly trending inlier with the Horton Group Rocks (Fig. 3). In the area of the Upper Johnson veins the Fisset Brook Formation defines the western limb of an anticline, the crest of which is approximately 600 metres to the east. The Fisset Brook Formation is the lower most unit of Late Devonian-Carboniferous rocks and includes basalts, rhyolite tuffs and clastic sedimentary rocks. The Fisset Brook Formation has been dated at ca. 373 m.y.(U-Pb zircon; Dunning et al, 2002). This unit lies unconformably on the Pre-Cambrian and Devonian rocks to the east. The Fisset Brook Formation is host to most of the barite-fluorite veins in the Lake Ainslie area. The welded tuff unit is the preferred host to most of the veins, probably due to its susceptibility to brittle fracture.

The Fisset Brook Formation is disconformably overlain on the west by the clastic sedimentary rocks of the Lower Mississippian Horton Group. The Horton Group occasionally lies unconformably on basement rocks in the absence of the Fisset Brook Formation. The Middle to Late Carboniferous Windsor Group disconformably overlies the Horton Group and is composed of marine limestone, gypsum, shale and sandstone.

Faults

There are a series of east-northeast trending regional faults which affect rock units in the area. These faults have a right-hand strike-slip separation and result in a rhombic distribution of map units (Fig. 3). The barite-fluorite veins are commonly parallel to these faults and interpreted to be hosted by related faults.

7.0 - Property Geology

7.1 – *Bedrock Geology*

The dominant rock unit in the immediate area of the barite veins on Johnson Hill is welded rhyolitic tuffs of the Fisset Brook Formation (Fig. 4). In outcrop, the tuffs are pink to orange in colour and highly fractured (commonly slickensided) due to their brittle nature. Previous workers have divided the tuffs into two units based primarily on colour. The two types of welded tuff are greyish-red welded rhyolite tuff and a greyish-orange pink welded tuff. The greyish-red tuff is extremely fine grained, massive and somewhat granular in texture. Small cavities lined with limonite are occasionally found in this unit, as well as spherulites. The greyish-orange pink welded rhyolite tuff is fine grained, porous and contains quartz phenocrysts (Creed 1968). There are no certain bedding planes in either of these units so strike and dip determinations cannot be made. These units are host to the barite mineralization. The welded tuff unit occupies the area of

Johnson Hill and is responsible for this prominent topographical feature. To the east, the tuff is conformably overlain by basalts andesites and lithic wackes of the Fisset Brook Formation. To the west, the tuff unit is unconformably overlain by the early Mississippian Horton Group clastic sediments and limestones (Fig. 4).

7.2 *Mineralization*

Creed (1968) gives a very detailed description of the mineralogy of the barite veins, a short overview of which is given here. Barite in the veins varies from white to pink in colour, and is aphanitic to coarse grained. Fluorite is highly variable in color with pale green and colourless varities most common within the veins. Violet and bluish-violet fluorite is found predominately in fractures adjacent to the veins. Banding in the veins is always parallel to the walls of the veins, with wall rock fragments banded symmetrically. Banding is of two types, textural and compositional. Textural banding in the veins is due to variations in grain size, crystal form and colour. Fine grained barite is found near the contact with the wall rocks while coarse grained barite is always found in the centre of the vein. Compositional banding is due to zoning of barite, fluorite and calcite. Pale green fluorite is the most common mineral in contact with the wall rock, while barite is most common in the centre of the vein. Calcite is of two ages, an early calcite predating fluorite and barite, and a later stage of calcite which lines cavities.

Mineralogical variations within individual veins have been noted by several previous workers and assays can vary greatly from hole to hole. There are variations in colour of the primary vein minerals as well as the relative proportions of the minerals within the veins. These variations can be partly explained by the paragenesis as outlined by Creed (1968).

The earliest mineralization was probably the purple fluorite found in veinlets outside the principal veins. The purple fluorite forms at a higher temperature than the less vibrantly coloured varieties in the veins. Within the veins calcite and green fluorite were the first mineral to precipitate. It therefore may be reasonable to assume that the areas near the bottom of the open fault zones may be expected to be richer in calcite and fluorite.

Creed (1968) noted that there was an increase in calcite with depth in respect to the proportion of both barite and fluorite and that the temperature gradient may be responsible for this change. However there are no quantitative values for calcite from the drilling, and thus no definite determination can be made with respect to depth. There have been three episodes of fluorite deposition and two of barite and calcite. Creed (1968) states that his studies did not reveal any variation in the relative proportion of barite to fluorite with depth. The fault zones hosting the barite veins provide open space for the deposition of barite-fluorite mineralization and the composition of mineralization at any particular point in the vein may reflect the space available and the point in the paragenetic sequence that the mineralization was being deposited. In addition, the variables of pressure and temperature may bear some influence on the local vein composition.

The barite-fluorite veins trend approximately 070° and are interpreted to occur in faults which parallel the regional faults which offset the map units in the area (Fig. 2). All the barite veins located on Johnson Hill occur in fault zones in welded rhyolite tuffs and it is thought that this reflects the brittle character of the tuffs, which results in open spaces receptive to barite - fluorite deposition.

There are four main areas of interest in the Johnson Hill area; (1) the Lower Johnson Vein, (2) the Conwest Vein, (3) the Upper Johnson South Vein and 4) the Upper Johnson North Vein.

Lower Johnson

The Lower Johnson Vein is located near the base of Johnson Hill (Map 1). It is a large, 1.5 metre vein that is exposed in a large open cut. This vein was mined in the 1930's and 1940's from an adit near stream level. The vein strikes at 284° and dips 50° north, and has only been intersected in three drill holes (J-5, J-6 and J-8; Fig. 5). There were two intersections in J-5 that may represent the Lower Johnson Vein; both were narrow, and probably indicate that the vein bifurcates at depth. The intersections in J-6 and J-8 may represent the Lower Johnson, although this is not certain. The intersection in J-6 is narrow 2.7 feet and in J-8 is much wider 25.3 feet, but is probably drilled down dip.

Conwest trenches

The area of the Conwest trenches exposed a stringer zone over a wide area 30 feet (9.1 metres) and although trenching failed to reveal any large continuous veins on surface, the presence of these wide stringer zones appears to indicate areas of exploration interest. Only one drill hole has tested this stringer zone (72-5). This hole failed to intersect the Conwest vein, but did intersect two very interesting veins beneath the stringer zone.

Upper Johnson South Vein

The Upper Johnson vein is exposed in a series of trenches near the top of Johnson Hill. The vein on surface appears to be vertical or steeply dipping to the north. However, drill hole information indicates the Upper Johnson South Vein dips to the south, although it is often vertical or nearly so. This vein has been intersected in eleven of the twenty holes drilled to test its continuity. Three holes intersected Horton sediments, one was lost short of the target and five hit stringer zones and/or breccias zones with variable amounts of barite/ fluorite (Fig. 6). One hole, J-8, should have intersected the Upper Johnson but failed to hit any mineralization near the projected location of the vein. This hole may have wandered off course, as it was one of the few holes that steepened with depth. The drill hole data indicate that the Upper Johnson South Vein is very continuous, although it does pinch and swell from widths of 4 feet (1.3 metres) to 45 feet (13.7 metres), and is occasionally represented by stringer zones.

The Upper Johnson South Vein has been intersected in drill holes over a length of 780 feet (237 metres), measured from drill hole 72-5 in the east to J-13 in the west (Map 1). The vein is open to the west, where it continues under the Horton cover rocks. In the east, the last intersection of vein material is in drill hole 72-5. However, drill hole 72-8, about 128 metres east of 72-5, intersected a wide stringer zone (54.9 metres) containing 5-10% Ba/Fl, indicating the potential for a mineralized vein at least this far east. The vein extends from surface +580 feet (+177 metres) to -200 feet (-61 metres) in the deepest intersection and is open to depth in some areas.

Upper Johnson North Vein

The Upper Johnson North Vein has been confused with the Upper Johnson South Vein and not previously recognized as a discrete vein. This vein is 40-70 feet (12-21 metres) north of the Upper Johnson, and is only intersected in holes that went well past the Upper Johnson. This vein was intersected in nine holes and represented by a stringer zone in 72-8. Most holes to test the Upper Johnson South Vein were drilled from the south and were stopped before they reached the Upper Johnson North Vein. This vein varies from 5 feet (1.5 metres) to 26 feet (7.9 metres) in thickness. This vein is open to the west, where it was intersected in the extension of hole J-13; this intersection is the widest of all the intercepts on this vein. To the east, this vein was intersected in 72-5 and is open for 420 feet (128 metres) before 72-8 where it is represented by a stringer zone. The Upper Johnson North Vein does not appear to come to surface but has been intersected from elevation +420 feet (128 metres) J-17 to -305 feet (-93 metres) J-13. The widest intersections on this vein are at depth and at the extreme east and west ends of the drilled area (Fig. 7).

The relationship between the Upper Johnson South and North veins is not clear, due in part to the limited number of drill holes that have intersected both veins. The Upper Johnson South Vein dips steeply south to vertical while the Upper Johnson North Vein dips steeply north to vertical. This may imply that the two veins may join at some point in vertical space to become one vein. There is, however, no direct evidence that this is actually the case. This parallel system of faults is also seen at Bald Hill to the north where the Campbell-MacMillan Vein is twinned with the D.J. MacDougall Vein.

8.0 - Work Performed

8.1 *Surveying*:

Previous drill programs in the Lake Ainslie area typically provide local grid coordinates for drill collars which are relative to an established cut grid. All of the coordinate data in the area of the Campbell and MacMillian veins were local grid coordinates. Coordinates of early drilling in the area of the Upper Johnson vein were also defined relative to a local grid. For diamond drill holes J1-J14 drilled on the Upper Johnson vein, elevation data was provided. However, the lack of accurate real world coordinates for these holes suggest that the elevation data likely were acquired by an altimeter and of unknown accuracy. Diamond drilling by Atlantic Industrial Minerals provides precise real world coordinates for holes J15-J19, with easting, northing and elevation data presented to the centimetre. However, the method by which this data was acquired is not specified. Although the easting and northing data are similar to the data we acquired for these holes, the elevation data varies significantly in some instances.

A surveying program was undertaken on the East Lake Ainslie property to establish accurate locations of diamond drill-hole collars and other points of reference, including outcrop exposures and shafts, related to barite mineralization. Surveying was conducted using a Trimble Pro XR GPS. Bench Marks were in the open and are accurate to 1-2 centimetres. Drill holes were typically under forest cover and are considered accurate to within 2 metres. All survey coordinates were acquired in MTM ATS 77 projection and then converted to NAD 83 projection utilizing transformation software accessed at the GeoNova website (www.gov.ns.ca/geonova /home/default.asp). Surveying focused on the areas of the Upper Johnston and Campbell-MacMillian veins and two base stations were established in each location which can be utilized during any follow-up work. The principal aim of the current surveying is to provide accurate co-ordinates for historical drill-holes collars so that previous drilling can be incorporated into three dimensional software for further evaluation of vein distribution and character. In addition to evaluating the distribution and volume of the veins this information will aid in targeting further drilling. Additional details on the surveying can be found in Appendix 3.

The site of historic diamond drill holes were located in the field using information provided in historical reports on drilling. In the area of the Upper Johnston Vein the location of drill holes could easily be established using maps included in drilling reports as the drill roads are still evident. The precise locations of drill holes J 15-19 and 1953 1-3 were determined by the presence of drill casing still in the ground. The locations of other drill holes (J 1-14) were determined by evidence of drill set-ups and with the hole location assigned to the centre of the set-up. In the area of the Campbell and MacMillian veins the drill holes were determined by their grid reference assigned in drill reports. The original grid was recognized and re-established in the field by re-flagging and re-chaining. The location of the drill holes were then established by their documented grid reference reported in the historical drill records. The result of the surveying work is presented in Table 2.

Table 2: Table of survey coordinates for diamond drill hole collars and relevant locations in the East Lake Ainslie area. Point column provides the diamond drill hole number for drill hole collars and other points of reference as defined.

Upper Johnson DDH's

Points	Northings MTM	Eastings MTM	Eastings NAD 83	Northings NAD 83	Elevation (m)
J-1, 2	5107986.624	4529015.713	644925.469	5108100.478	170.11
J-3, 4, 5	5107977.622	4529045.704	644955.623	5108092.044	171.87
J-6, 7, 8	5107901.124	4528993.859	644905.233	5108014.585	133.96
J-9	5107981.443	4529148.143	645057.967	5108097.798	116.59
J-10[1]	5107925.055	4528951.591	644862.523	5108037.713	131.11
J-11	5107864.283	4528974.162	644886.236	5107977.381	111.92
J-12, 13	5107848.561	4528913.677	644826.051	5107960.521	106.74
J-14	5107828.332	4528980.302	644893.053	5107941.554	100.77
J-15	5107863.396	4528937.755	644849.874	5107975.807	112.03
J-16	5107925.480	4528941.700	644852.626	5108037.951	130.4
J-17	5108017.752	4529043.622	644952.784	5108132.126	188.47
J-18, 19	5108034.978	4529143.786	645052.601	5108151.239	121.86
72-5	5108230.746	4528994.466	644899.619	5108344.143	216.03
72-8	5108227.845	4529146.229	645051.403	5108344.108	145.32
1955-1, 2, 3	5107823.593	4529044.913	664957.739	5107938.036	99.83
LJ-adit[2]	5107923.388	4529132.788	645043.711	5108039.467	116.72
UJ- south west end[3]	5108043.827	4529043.849	644952.519	5108158.199	186.19
UJ- South east end[4]	5108033.009	4529026.952	644935.830	5108147.065	186.69
UJ- North [5]	5108051.504	4529033.270	644941.797	5108165.675	191.98

[1] May not be exact location, site bulldozed for J-16
[2] Adit on the lower Johnson Vein
[3] West end of exposed Upper Johnson South vein in trench
[4] East end of exposed Upper Johnson South vein in trench
[5] Outcrop exposure of the Upper Johnson North vein
All other points refer to diamond drill hole collars

Bench Marks

Points	Northings MTM	Eastings MTM	Eastings NAD 83	Northings NAD 83	Elevation (m)
UJ-1	5108051.286	4529034.922	644943.453	5108165.488	115.658
UJ-2	5108015.266	4529047.436	644956.644	5108129.712	108.459
BM-1	5109577.297	4528510.873	644390.719	5109681.253	132.447

BM-2	5109536.542	5428491.482	644372.102	5109640.141	124.785

Campbell-MacMillan Veins

Points	Northings MTM	Eastings MTM	Eastings NAD 83	Northings NAD 83	Elevation (m)
C-1	5109552.215	4528530.995	644411.310	5109656.557	210.2
C-2	5109481.142	4528567.364	644448.956	5109589.186	185.85
C-4	5109615.257	4528613.140	644492.247	5109721.135	207.11
C-5	5109538.970	4528466.273	644346.853	5109642.093	196.71
C-6	5109515.763	4528418.956	644299.985	5109617.998	170.61
C-7, C-12	5109457.967	4528387.716	644269.843	5109559.625	130.97
C-8	5109553.343	4528413.826	644294.146	5109655.472	179.02
C-10	5109625.696	4528493.807	644372.743	5109729.319	204.64
C-11	5109452.325	4528321.223	644203.471	5109552.729	111.07
C-13	5109648.006	4528543.489	644421.993	5109752.562	200.85
C-14	5109765.637	4528505.587	644381.879	5109869.450	178.13
6	5109442.951	4528224.959	644107.406	5109541.540	90.05
7	5109421.612	4528199.421	644082.276	5109519.724	86.66
8 & 9	5109425.065	4528267.934	644150.709	5109524.469	90.54
10	5109391.488	4528304.968	644188.368	5109491.600	97.80
12	5109366.911	4528253.853	644137.729	5109466.063	101.30
13, 15, 16, 18	5109437.508	4528319.804	644202.332	5109537.889	98.96
17 & 21	5109606.577	4528561.126	644440.408	5109711.475	206.18
20 & 22	5109539.154	4528467.077	644347.653	5109642.292	196.84
23 & 25	5109635.835	4528602.735	644481.456	5109741.512	210.52
24	5109588.864	4528524.291	644403.916	5109693.071	211.58
26	5109658.796	4528639.375	644517.654	5109765.160	205.76
27 & 28	5109531.050	4528578.636	644459.340	5109636.296	196.24
71-2	5109467.624	4528504.141	644386.059	5109571.479	176.17
71-4	5109572.527	4528695.824	644575.719	5109679.977	209.46
71-5 & 71-7	5109458.246	4528449.375	644331.482	5109561.069	155.53
71-6	5109370.382	4528413.292	644297.066	5109472.544	97.57
MacMillan vein[1]	5109674.294	4528489.564	644367.584	5109777.825	190.80
Campbell gov. adit[2]	5109554.807	4528238.146	644118.478	5109653.619	102.72
Campbell vein adit[3]	5109496.842	4528265.967	644147.387	5109596.193	97.94

[1] Open cut on the MacMillian vein

[2] Entrance of government adit on the Campbell vein

[3] Entrance of adit on the Campbell vein

8.1 *Maps and Cross Sections, Upper Johnson Vein* :

Historical drill hole data from drill logs in the area of the Upper Johnson Vein was captured into a digital database using Logger Software. This data was then exported into a MapInfo database. The MapInfo files were imported into the drill hole tool of Discover software where the drill logs were linked with collar and down hole survey data.

The drill hole traces have been ***projected*** onto a plan map of the area (Map 1) and a series of cross sections cut perpendicular to the Upper Johnson Vein (Sections A-E, in back of report) to evaluate the distribution and character of the vein system. Comparison of drill hole locations on the plan map with locations of previous maps indicate generally reasonable correlation, particularly with the latest holes (J15-19) drilled by Atlantic Industrial Minerals. Coordinates determined for earlier drilled holes commonly vary up to more than 10 metres in eastings and or northings.

The information on the cross sections relates to three previous drill campaigns which vary in the level of detail provided and thus a certain level of interpretation is required. In general, all cross sections indicate a high level of brecciation and mineralization in the area between the Upper Johnson vein and the Conwest vein. A previous report by Acadian Mining had subdivided veins previously assigned to the Upper Johnson vein into two separate veins referred to as the Upper Johnson South and the Upper Johnson North veins. This subdivision seems to hold up in most of the sections although the character of the "vein" can vary significantly within the section. In some cases the vein is defined by wide massive veins in one hole whereas it may be defined by breccia zones with stringers of thin veins up or down dip (eg. Upper Johnson Vein south, Section A). In some cases there is evidence that the vein is discontinuous, such as the in Section B where the thick mineralized zone defining the Upper Johnson South Vein in holes J10 and 11 is not found at depth in hole J 14. It is clear in many instances that drilling was halted prior to possible intersection of the Upper Johnson North Vein; eg. Section D.

There is evidence of mineralization both north and south of the Upper Johnson Vein system. Sections C and D show several veins and mineralized faults south of the Upper Johnson vein. These veins may represent extensional veins similar to the Lower Johnson Vein which are oblique to the main veins. Veins intersected north of the Upper Johnson in Section near the collar of hole 72-5 do not correlate with the Conwest vein exposed in that area and may represent an unknown mineralized structure.

9.0 Discussion Conclusions and Recommendations

The survey data obtained provides accurate collar locations from which a three dimensional evaluation of the drill hole data can be considered. The cross sections constructed indicate that the barite-fluorite mineralization in the area of the Upper

Johnson Vein varies in character along strike and down dip. This is interpreted to reflect the character of the brittle fault hosting mineralization.

Due to the strike and dip variability of the Upper Johnson vein it is recommended that further evaluation requires infill drilling at a minimum spacing of 25 metres. It is also recommended that further drilling is required to evaluate the potential of additional mineralized faults north of the Upper Johnson Vein.

References

Creed, R.M. 1968
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Dunning, G.R, Barr, S.M, Giles, P.S., McGregor, D.C., Pe-Piper, G and Piper, D. 2002
Chronology of Devonian to early Carboniferpus rifting and igneous activity in souithern Magdalen Basin based on U-Pb (zircon) dating. Canadian Journal of Earth Sciences, 39, pp 1219-1237.

Forgeron, Steve 2004
Atlantic Industrial Minerals. Assessment Report – Barite and Fluorite Deposits, East Lake Ainslie, Inverness County, NS. 2004.

Johnston, D. 1965
Consolidated Mogul Mines Ltd. Assessment file 11K/03A 06-J-31(08), 1965.

Zurowski, M. 1972
International Mogul Mines Ltd. Assessment file 11K/03A 06-J-31(12), 1972.

Zurowski, M. 1972
New Mount Costigan Mines. Assessment file 11K/03A 06-J-31(13), 1972.

Appendix I: Statement of Qualifications

RICHARD J. HORNE.

I am Richard Horne, of Dartmouth, Nova Scotia, and hereby certify that:

1. I am a graduate of Dalhousie University, from which I received a Bachelor of Science degree(Hons.) in Geology in 1980 and a Masters of Science in Geology in 1998.

2. I am the Qualified Person responsible for preparation of this report.

3. I have actively worked as geologist since 1980 in Nova Scotia, Quebec, Ontario, Newfoundland and New Brunswick.

4. The accompanying report is based on the independent study of the referenced geological, geophysical and geochemical reports and maps, for the properties and the surrounding areas.

Dated this 28th day of February, 2008, in Halifax, Nova Scotia, Canada.

Richard J. Horne

Appendix II: List Of Personnel

Acadian Mining Personnel

Glen Covey ______________ Senior Geologist
Adam Sherry______________ GIS Specialist
Rick Horne_______________ Chief Geologist

APPENDIX III

Surveying

Diamond drill-hole collars and other relevant information from the area of the Upper Johnson and the Campbell Barite Veins were surveyed using differential GPS methods. All data was acquired in MTM ATS77 co-ordinates. Included in this appendix are relevant information from the survey, including the control monument used for the reference and the survey data for local bench marks established on the property.

Initially Bench Marks were established in each area; UJ-1 and UJ-2 in the area of the Upper Johnson vein and BM-1 and BM-2 in the area of the Campbell vein. Nova Scotia Control Monument number 213813 was used as a base station for the survey equipment. Bench marks are defined in the field by steel rebar rods driven into bedrock in the area of the Johnson Vein and by similar, previously existing steel rebar rods in the area of the Campbell vein.

Interim

NOVA SCOTIA
Natural Resources

Map 11 K 3A
Refs. 11 K 3D

Form 10 - Statement of Assessment Work Expenditure
(pursuant to the *Mineral Resources Act*, S.N.S. 1990, c. 18, s. 43(1))

(Complete as necessary to substantiate the total claimed.)
Re: Licence No. 7099 Date of issue Feb 28, 2007

Type of Work		Amount Spent
1. Prospecting	____ days	
2. Geological mapping	____ days	
3. Trenching/stripping/refilling	____ m^2 / ____ m^3	
4. Assaying & whole rock analysis	____ #	
5. Other laboratory	____ #	
6. Grid:		
(a) Line cutting	____ km	
(b) Picket setting	____ km	
(c) Flagging	____ km	
7. Geophysical surveys Airborne:		
(a) EM/VLF	____ km	
(b) Mag or Grad	____ km	
(c) Radiometric	____ km	
(d) Combination	____ km	
(e) Other ____	____ km	
8. Geophysical surveys Ground:		
(a) EM/VLF	____ km	
(b) Seismic soundings	____ #	
(c) Magnetic/telluric	____ km	
(d) IP/resistivity	____ km	
(e) Gravity	____ km	
(f) Other ____	____ km	
9. Geochemical surveys		
(a) Lake, stream, spring (i) Water	____ samples	
(ii) Sediments	____ samples	
(b) (i) Rock	____ samples	
(ii) Core	____ samples	
(iii) Chips	____ samples	
(c) (i) Soil	____ samples	
(ii) Overburden	____ samples	
(d) Gas	____ samples	
(e) Biogeochemistry	____ samples	
(f) Sample collection	____ samples	
(g) Other ____	____ days	
10. Drilling:		
(a) Diamond (# holes/m)	____ / ____ m	
(b) Percussion (# holes/m)	____ / ____ m	
(c) Rotary (# holes/m)	____ / ____ m	
(d) Auger (# holes/m)	____ / ____ m	
(e) Reverse circulation (# holes/m)	____ / ____ m	
(f) *Logging, supervision, etc.*	____ days	
(g) Sealing (# holes)	____ #	
11. Other (describe)		
Subtotal		
Overhead costs		
12. Secretarial services	DNRMPT MAR02'09 15:01	
13. Drafting services		
14. Office expenses (rent, heat, light, etc.)		
15. Field supplies		
16. Compensation paid to landowners		
17. Legal fees		
18. Other (describe)		
Subtotal		
Grand total		9460

See attached

See attached

List the names of the persons who conducted the work reported in the previous table and the dates during which the work was performed.

Name	Address	Dates Worked
Adam Sherry		Feb 2009
Rick Horne		Feb 2009
Glen Covey		July 2008
Mike Young		July 2008

I hereby certify that the information in this form is true and correct, that it has not before been submitted for assessment work credit and that it is the total of all work conducted on the licence during the past licensed year.

As Claims Administrator I am duly authorized to make this certification.
(position in company or licensee)

Dated at Halifax in the Province of Nova Scotia on March 2, 2009

Name and address of licensee: Acadian Mining Corp.

suite 2001, 1969 Upper Water Street, Halifax, NS. B3J 3R7

Signature [signature]

For further information, contact the Registrar of Mineral and Petroleum Titles at 1-902-424-4068.

Work completed Lake Ainslie, licence 7099.

1	Locating drill holes in field, including re-establishing historic grid; 3 days field work @ $500/day	$1500
2	Surveying, including establishing bench marks on the property; 1 day, three people	$1600
3	Established three dimensional database of historic drill data 6 days	$3000
4	Establish cross-sections and report writing. 5 days	$2500
		$8600
	10% overhead	$860
	Total	**$9460**

N
644,600 mE
644,700 mE
644,800 mE
644,900 mE
645,000 mE
645,100 mE
645,200 mE
645,300 mE
5,108,300 mN
5,108,200 mN
5,108,100 mN
5,108,000 mN
5,107,900 mN
A
B
C
D
E
Projection of Upper Johnson North Vein
Projection of Upper Johnson South Vein
Projection of Lower Johnson Vein
72-5
72-8
72-8 222.2m
72-5 349m
J18 105m
J19 120m
J17 70.2m
J04 157.89m
J03 91.74m
J02 106.68m
J08 215.49m
J01 57.61m
J07 208.79m
J06 147.22m
J10 177.39m
J14 277.06m
J11 199.4m
J16 80m
J13 245.09m
J15 149m
J12 135.64m
J09 62.48m
J05 90.22m
UJ-1
UJ-2
22%: 6.1% 3m
33.6%: 16.4% 7.3m
82.2%: 10.3% 3.1m
90.5%: 6.2% 1.3m
43.6%: 22.2% 5.5m
64.3%: 10.1% 4m
68.6%: 8.9% 6.1m
86.2%: 11.8% 2.4m
40%: 11% 3.1m
33.5%: 8.2% 4.3m
68.8%: 13.9% 3.1m
41.9%: 7.6% 3.4m
52.2%: 13.2% 4.9m
50.1%: 31.8% 2.4m
62.2%: 11.4% 1.8m
31.3%: 11.4% 13.7m
26.8%: 19% 7.9m
52.2%: 21.7% 13.7m
51.2%: 5.12% 3.7m
25%: 13.8% 4.9m
Drillhole
Benchmark
Topo Contours
Trace of Drillhole
Line of Section
River
Seasonal Road, Trail
Massive Barite Vein
Historical Trenching
Outcrop
Barite
Fluorite
25.5%: 12.2%
Intercept Length 7.5m
Mineral Percentages
Late Devonian - Carboniferous
Horton Group
Fiset Brook Formation
Welded Rhyolitic Tuff
Amygdaloidal basalt and greywacke
Proterozoic - Devonian
Orthogneiss to granite
Acadian Mining Corporation
Map 1
Plan Map Showing Drillhole Locations and Traces With Geology Base
Lake Ainslie, NS
Date:5/3/2009
Author: AS
Office: Acadian
Drawing: Map
Scale: 1:1000
Projection: UTM Zone 20 (NAD 83)
0 25 50
metres

AR2009-026


5,107,850mN
5,107,900mN
5,108,000mN
5,108,050mN
644,800mE
5,108,100mN
5,108,150mN
644,750mE
5,108,200mN
100mRL
50mRL
0mRL
-50mRL
-100mRL
J13
J12
J15
J12
135.64m
J15
149m
J13
245.09m
Overburden
Missing Core
Carboniferous
Volcanics
Vein Area
Breccia
Stringer Zone
Date:4/3/2009
Author:
Office:
Drawing:
Scale: 1:500
Section A
Lake Ainslie, NS
Projection: Non-Earth (meters)
0
7.5
15
30
metres

AR2009-026


5,108,000mN
5,108,050mN
644,800mE
5,108,100mN
5,108,150mN
644,750mE
5,108,200mN
5,108,250mN
644,700mE
100mRL
50mRL
0mRL
-50mRL
-100mRL
J14
J11
J10
J16
unconformity
Fault Zone
Contact with unconformity
Faulted contact with brecciated Fisset Brook Formation
30cm barite vein
60% barite 30% fluorite(light green)
J16
80m
First calcite noted
1.3m breccia, with ba cement
minor Ba and Ca veins
Breccia with Ba matrix
1.34m barite, minor fluorite
minor ca-fl-ba veins
minor ca-ba
minor ba-ca-fl
.15 m ba-fl vein
Breccia with ba-ca-fl
minor ba-fl
minor ba-fl
J10
177.39m
ba cemented breccia
Minor ba-fl
J11
199.4m
?
?
Minor ba-ca veins
J14
277.06m
Overburden
Missing Core
Carboniferous
Volcanics
Vein Area
Breccia
Stringer Zone
Date:4/3/2009
Author: AS
Office: Acadian
Drawing: Section
Scale: 1:500
Section B
Lake Ainslie, NS
Projection: Non-Earth (meters)
0
7.5
15
30
metres

AR2009-026

5,107,900mN
5,107,950mN
644,950mE
5,108,000mN
5,108,050mN
644,900mE
5,108,100mN
5,108,150mN
644,850mE
5,108,200mN
150mRL
100mRL
50mRL
0mRL
-50mRL
J07
J06
19 cm barite vein
27 cm barite vein
Upper Johnson South Vein
J06
147.22m
Upper Johnson North Vein
J07
208.79m
Overburden
Missing Core
Carboniferous
Volcanics
Vein Area
Breccia
Stringer Zone
Date:4/3/2009
Author: AS
Office: Acadian
Drawing: Section
Scale: 1:500
Section C
Lake Ainslie, NS
Projection: Non-Earth (meters)
0 7.5 15 30
metres

AR2009-026

5,108,050mN
645,050mE
5,108,100mN
645,000mE
5,108,150mN
5,108,200mN
644,950mE
5,108,250mN
5,108,300mN
644,900mE
5,108,350mN
150mRL
100mRL
50mRL
0mRL
-50mRL
J05
J04
J03
J02
J01
Upper Johnson South Vein
Stringer Zone
J01
57.61m
J03
91.74m
J05
90.22m
J02
106.68m
J04
157.89m
NOTE: Holes J01, J02, J03 and J04 stopped before intersecting possible extension of the Upper Johnson North Vein
Overburden
Missing Core
Carboniferous
Volcanics
Vein Area
Breccia
Stringer Zone
Date:4/3/2009
Author: AS
Office: Acadian
Drawing: Section
Scale: 1:500
Section D
Lake Ainslie, NS
Projection: Non-Earth (meters)
0
7.5
15
30
metres

AR2009-026

200mRL
150mRL
100mRL
50mRL
0mRL
-50mRL
15 cm barite vein
15 cm barite vein
Stringer Zone with a few thick massive veins. One 2.3m
Breccia zone with barite vein
Upper Johnson South Vein
J18
J18 105m
J19 120m
Overburden
Missing Core
Carboniferous
Volcanics
Vein Area
Breccia
Stringer Zone
Date:4/3/2009
Author:
Office:
Drawing:
Scale: 1:500
Projection: Non-Earth (meters)
Section E
Lake Ainslie, NS
0 7.5 15 30
metres

AR2009-026