

Memo: Black Fox Property Mapping & Sampling Program, Terrace Bay, Ontario, June 21-30, 2010

Approximate Location
Latitude: 48° 47' 54"N
Longitude: 86° 50' 42"W
(NTS 42D15)
Thunder Bay Mining Division

Submitted to:

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Submitted by:

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July 1, 2010

Vancouver, B.C.

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Introduction

An 8 day prospecting, mapping and humus sampling program was carried out on Lund Gold's Black Fox Property between June 21 and June 29, 2010 by R. Therriault (Kakabeka Falls) and J. Klarner (Thunder Bay). The results of the mapping/prospecting are discussed below. In total, 77 rock grabs and 95 humus samples were taken. Details regarding sample location, mineralization etc is located in Appendix A and Appendix B.

Geology

Time restrictions permitted only a brief reconnaissance-scale look at the geology over a relatively small area of the Property. As a result, the descriptions & discussions below should be combined with those of Walker (1967) and integrated with future observations on the Property. Some of the more interesting lithotypes seen during the program are shown in Figure 1. More detailed (1:3,000) geological mapping was completed on the shore of Pistol Lake to help explain the humus gold anomaly which occurs just west of the lake. The results of this mapping are shown in Figure 2.

Lithotypes

Metasedimentary rocks

Pelitic (silty) to argillaceous (muddy) metasediments are the most common form of this unit observed during the June program. The pelitic unit can be particularly difficult to distinguish from sheared intermediate-mafic volcanics; however, the metasediments tend to be more flaggy than the metavolcanics. Psammite is relatively common as well, and often exhibits good graded bedding. Conglomerate was observed in two locations – one on the western shore of Pistol Lake (thin unit, cm to dm sized volcanic/granitic clasts) and N of Pistol Lake (512551/5405968; conglomerate-breccia, dm to metre sized granitoid and felsic volcanic clasts, in the thick metasedimentary package north of Pistol Lake, possible tops to north). Rusty chert boulders were also observed at 512596/5406133.

Intermediate to mafic volcanic rocks

The intermediate to mafic volcanics are typically fine to fine-medium grained, with feldspars commonly forming larger feathery grains in thick massive flows which imparts a semi-intrusive look to the unit. Pillows, sometimes with more leucocratic cores bordered by poorly formed varioles were observed in a number of locations (Figure 1). Pillow rind breccia and autoclastic flow breccia were also observed. For the most part, however, the flows are rather featureless, homogenous and massive. Discrete shear zones typically separate this unit from bordering metasediments, komatiites etc.

Komatiite

Two bands of komatiite were mapped along the shore of Pistol Lake. The unit forms thin flows with very well preserved spinifex textures indicating tops to the north. The unit is non-magnetic and not particularly altered – serpentinization is common; however, silica or carbonate alteration was not observed in any great amounts. Given the units' composition and thickness, one would think it would be more deformed/sheared yet this is not the case – only at its contacts is the unit notably deformed/sheared.

Calcite blastic chlorite-biotite altered volcanic/volcaniclastic(?)

The primary lithology of this unit is not known due to intense alteration. The unit consists of 40-50% coarse “eyes” or blasts of interconnected calcite (white to light green) separated by segregations of chlorite-biotite (50%) and minor disseminated pyrite. A few of the observed outcrops exhibit what look like lapilli fragments, so the unit is thought to be a fine-medium grained mafic volcaniclastic (tuff or lapilli tuff). This would make sense from an alteration point of view as a volcaniclastic would be more permeable to hydrothermal fluids.

Also lumped in with this unit is a less altered finer grained mafic auto/pyroclastic volcaniclastic (Figure 1) best observed immediately above the northern komatiite flow on the east side of Pistol Lake. It is possible that this represents the base of a north younging/fining volcaniclastic bed.

Gabbro/Gabbro-diorite

Medium grained gabbro-diorite (high-level) intrusives were encountered in several locations on the Property and may represent hypabyssal/subvolcanic feeders to the overlying intermediate to mafic volcanic rocks. They are generally composed of plagioclase and amphibole and are quite massive and homogenous. The unit has undergone little alteration, deformation and quartz veining, and so, was not investigated in any detail. Despite this, the boundaries of these units with the volcanics are likely locations for shear zones given the competency contrasts between the two units. One example of this occurs at 512160/5404757 where a NE trending shear zone occurs at the boundary between a thin sliver of the intrusives and the volcanics. A rubcrop sample of rusty heavily silicified sericitized and quartz veined (mafic volcanic?) was taken, and if it runs in gold, the shear zone should be prospected to the northeast.

A coarser grained and magnetic variety of this unit was found and sampled at one location (512792/5405137), containing several percent magnetite and pyrrhotite. It is either a more melanocratic variety of this unit, or a dyke. The sample was submitted for PGE analysis.

Semi-massive sulphide and sulphide cemented breccia

Very little can be said about this unit given that it was only observed at one location (512745/5405772) which turned out to be an extremely corroded and small outcrop. A few local boulders in the area exhibited bands of semimassive fine grained pyrite separated by chlorite rich layers with disseminated fine grained pyrite. Other boulders show a coarse autoclastic breccia texture cemented by heavily corroded pyrite. There does not appear to be a significant structural control to the mineralization, and unlike most of the other “zones” on the Property, there is no silica alteration. These characteristics, combined with the volcanology of the rocks (breccias) and the mineralization style (banded semi-massive and breccia cements) suggests that the mineralization may be primary (VHMS-style). Note that this outcrop occurs close to the boundary between metasediments and dacitic volcanics.

Felsic-intermediate volcanics

Medium grey coloured dacites were observed in a number of locations, more or less where they should be based on the mapping of Walker (1967). Interestingly, this unit seems to contain more

numerous zones of silica-pyrite alteration and sulphide bearing quartz veins than the other units. If the zones sampled in June 2010 prove to be anomalous in gold, then more attention should be paid to this rather rare lithotype. It is also worth noting that the sulphide breccia discussed above occurs very near the contact between this unit and a package of metasedimentary rocks. Furthermore, silicified pyritized rhyolite boulders have been observed and sampled near the 1210 ppb humus sample NE of Pistol Lake, also not far from the aforementioned contact. If assay results warrant it, detailed mapping should be conducted in this area.

Aplite

A couple of small (<2m) recrystallized aplite dykes were encountered on the shore of Pistol Lake (Figure 2). They trend approximately north-south, are bounded by small (<1m) shear zones and carry a few percent disseminated euhedral pyrite. Disseminated hematite gives the unit a more potassic look.

Feldspar-(quartz) porphyry

A medium grey coloured moderately sheared pyrite bearing feldspar +/- quartz porphyry dyke was noted and sampled along the highway at 513214/5404525.

Syenite

Medium grained K-spar porphyritic and fine grained k-spar microporphyritic syenite/mafic dykes occur in a few locations along the highway (e.g. 511861/5403528). Both varieties are strongly magnetic and crosscut stratigraphy. Disseminated fine-medium grained pyrite and magnetite occurs in the coarser variety and was sampled for gold. These dykes are likely related to the (circa 1 Ga) syenite complex several kilometres to the east.

Diabase

A NW trending diabase dyke at least 5 metres thick was mapped on the eastern shore of Pistol Lake. The diabase is coarse grained (plagioclase and pyroxene) and moderately to strongly magnetic.

Mafic Dykes

A 20 cm NW trending strongly magnetic mafic dyke was mapped on the western shore of Pistol Lake. It likely falls under the 'Diabase' or 'Syenite' unit described above.

Lamprophyre

One example of a lamprophyre dyke was observed at 512805/5404888. The unit is medium-coarse grained with mm-scale books of biotite/phlogopite set in a finer matrix of pyroxene.

Mineralization

Veining

The majority of veins observed on the Property in June 2010 were barren white quartz veins with little to no sulphides. They range from a few cm to nearly 1 m wide, are discontinuous along strike



Figure 1: A) Pillowed intermediate to mafic volcanics with more felsic (plagioclase) rich cores rimmed by poorly formed plagioclase varivols, east side of Pistol Lake; B) Thin flow of spinifex textured komatiite, east side of Pistol Lake; C) Autoclastic volcanoclastic breccia, intermediate to mafic composition, overlies komatiites on eastern shore of Pistol Lake; D) Extremely oxidized semimassive pyrite-chlorite and pyrite cemented breccia (primary?), NE of Pistol Lake.

(sometimes forming small knots or lenses) and appear to postdate most of the deformation. Although other types of more prospective veins are known to exist on the Property (e.g. north shore of Black Fox Lake), these already-discovered and sampled sites were not visited.

A number of vein types were noted while sampling along the highway, and are briefly discussed below. Pyrite is the only sulphide that has been observed with the exception of a few grains of galena in a couple of the veins along the highway.

- 1) Pre/syn shearing quartz +/- carbonate-pyrite veins occur in discrete (generally a metre or less wide) shears. They are often significantly deformed (sheared and folded) and look like the most hospitable of the three vein types for gold mineralization. The quartz veins core the chloritic-sericitic shear zones. These veins are always steeply dipping to vertical.
- 2) Un/weakly deformed coarse grained quartz-carbonate veins with various orientations. Likely unprospective for gold mineralization as there are no significant sulphides or alteration selvages.
- 3) Near flat-lying thin structurally controlled quartz-carbonate veins. Although the veins of this ilk seen along the highway do not look prospective, they were only observed in a “structurally interesting” area. Note that flat lying structures can host Archean gold mineralization (Sigma Mine). The “structurally interesting” area was not investigated in detail, however, bedding appears to be oriented clockwise of the main fabric, likely indicating folding. Future prospecting/mapping should record where these veins occur and sample the larger ones as the structures could prove to be important pathways for hydrothermal fluids or signs of “structurally complicated” areas where gold mineralization tends to occur.

Shears

Most of the observed shears on the Property are rather discrete (apx. 1m or less). Almost all contain variable amounts of silica-chlorite-sericite-pyrite alteration. They typically occur along lithological contacts and are continuous for at least several hundreds of metres (probably several kilometres). A greater degree of shearing/deformation was noted in the calcite blastic unit discussed above. Several shears mapped on the shore of Pistol Lake are oriented 10-20 degrees clockwise of stratigraphy. The reason for this is not clear, but it may relate to a later (post D2?) deformation/shearing event. North-south shear zones also bound and overprint aplite dykes in the eastern part of Pistol Lake.

A possibly significant shear zone occurs along the boundary of mafic intrusives and intermediate-mafic volcanics west of Little Black Fox Lake (discussed above). This NE trending shear zone may be worth additional prospecting if the sample taken shows anomalous gold.

VHMS-style mineralization

Semi-massive pyrite bands and pyrite cemented breccia was observed in one location on the Property (discussed earlier). The mineralization appears to be primary, although more mapping is required to confirm this. Nearby silicified pyritized rhyolite boulders could fit into this deposit classification, or, just as likely, into an epigenetic Archean gold environment.

Cu-Ni-PGE

One example of a magnetite-pyrrhotite bearing gabbro (dyke?) was observed on the Property. This style of mineralization is not considered as prospective given the rather leucocratic nature of the mafic intrusives on the Property. This, however, does not negate the existence of a more melanocratic fraction somewhere on the Property.

Structures

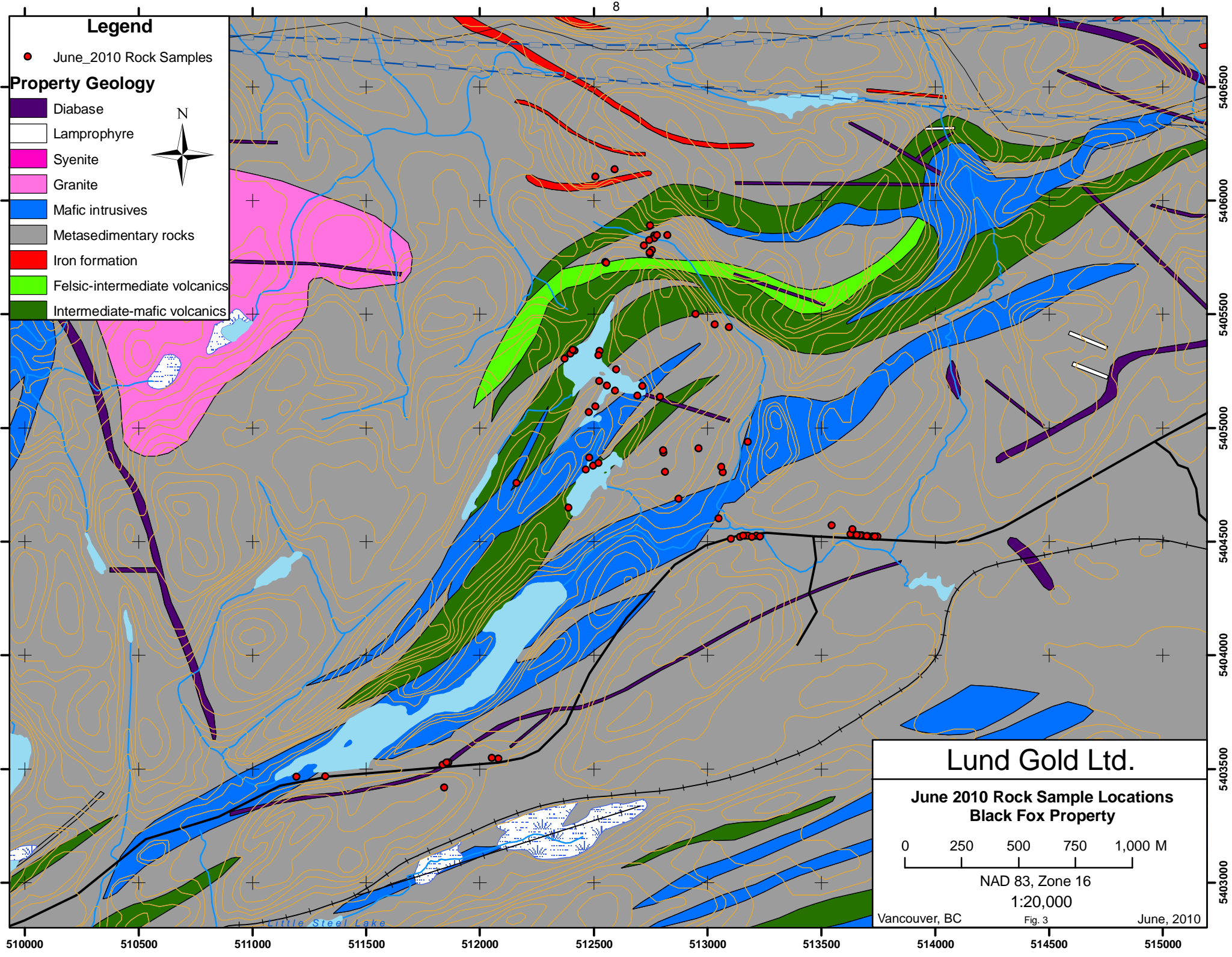
Aside from the shear zones discussed above, the only structures looked at in any detail were those along the shore of Pistol Lake. An (F2?) syncline has been proposed, trending approximately 040 through the centre of Pistol Lake. The axis is tenuous at best, based only on one younging direction in graded psammite beds and the geometry of the northern metasedimentary package shown on Walker's map (Walker, 1967). A lack of outcrop of the northern shore of the lake means that additional mapping needs to be completed east and west of the lake to prove/disprove the existence of this axis.

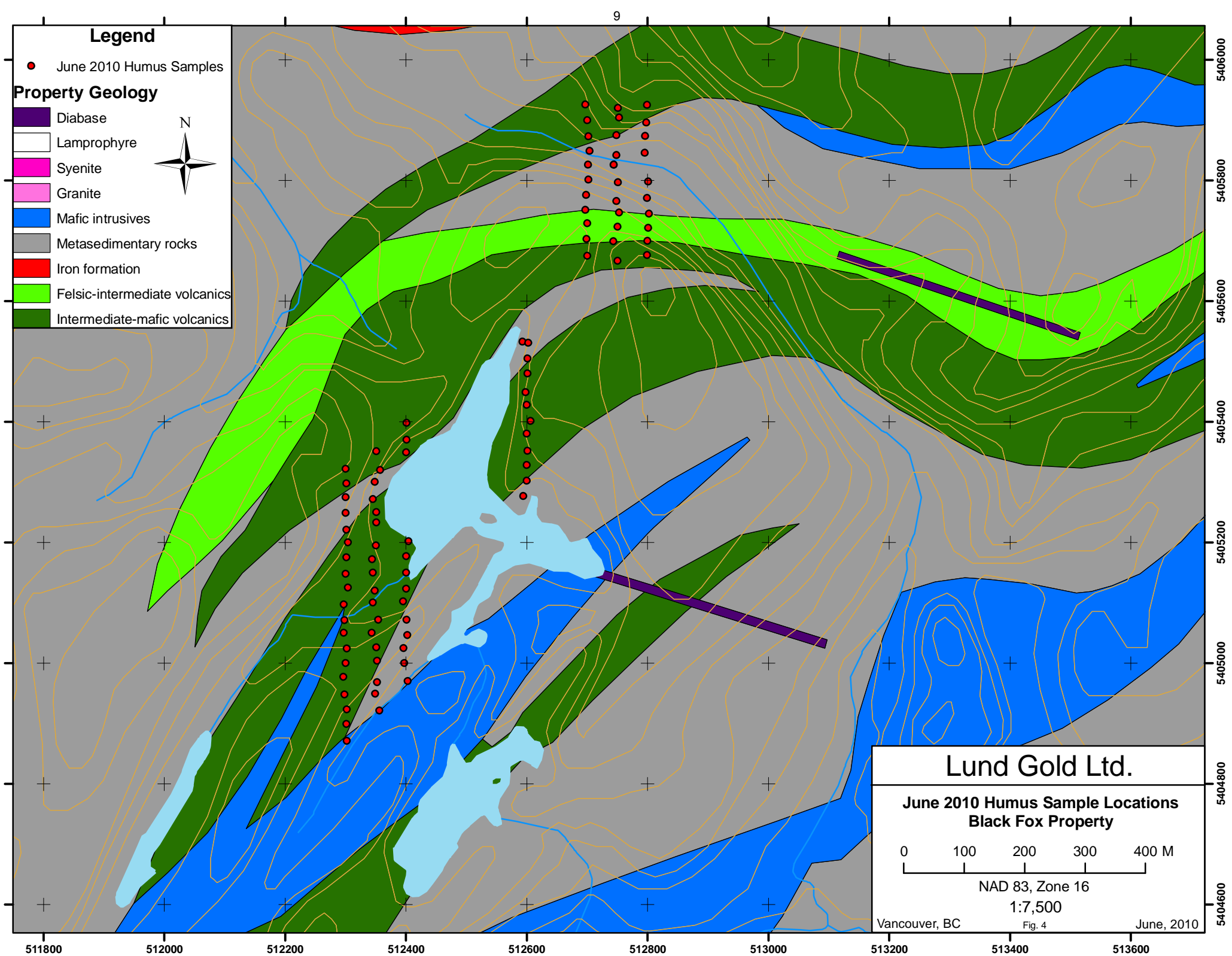
Additional structures around Pistol Lake include NW topping pillows & spinifex textured komatiites, N-S trending shear-bound aplite dykes, a NW trending diabase dyke, strongly folded pelite boulders and a small NW trending fault system (presumably controlling the emplacement of the diabase).

Interpretations and Recommendations

Explanation of humus anomalies

- 1) *Anomaly west of Pistol Lake*: Two distinct sub-anomalies occur just west of Pistol Lake, one to the south and one to the north (Appendix C). Originally it was thought that the two anomalies overlaid the sheared margins of the intermediate-mafic volcanics; however, detailed mapping indicates this is not the case. The southern anomaly is related to shearing along the northern boundary of the northern komatiite (and likely also on the margins of the small lens of psammite – Figure 2) but also to the sheared and heavily calcite-chlorite +/- biotite altered volcanoclastic (?) unit (Figure 2). This unit was sampled in June, 2010 to confirm that it does contain above background levels of gold. The northern anomaly is caused by one of two things: a) A number of folded sulphidized pelite boulder were found on the lakeshore down slope of where the northern anomaly occurs. These were sampled to determine if they contain anomalous gold. Attempts to find this unit in outcrop were unsuccessful; b) If the synformal fold axis proposed on Figure 2 is correct, then the anomaly would likely be caused by the same unit (north limb of fold) as the southern anomaly. This is the preferred explanation.
- 2) *1210 ppb sample, northeast of Pistol Lake (512749/5405824)*: Two possible explanations for the anomaly are proposed here: a) a number of silicified pyritic rhyolite boulders were found (and sampled) along the cliff edge just above (north of) the high humus sample. Structurally controlled quartz veining/stockworking/alteration and gold mineralization would be expected within/bordering a rogue rhyolite unit largely due to rheological contrasts with the surrounding units; b) the pyrite cemented breccia discussed earlier occurs a short distance to the south of





the high humus sample on a ridge on the south side of the creek. Other sulphide/breccia lenses may be present nearby, including under the swamp which borders the creek and includes the spot where the high grade humus sample was taken.

Recommendations

- 1) Humus sample results from different surveys need to be leveled, particularly if different labs or assay methods have been used. The figure below (Appendix C) shows the results of an OGS two-phase soil survey, with phase two located in the southeast corner. Obviously there are issues with what the background gold values are between the two surveys. This has been attributed to a shift in accuracy of the fire assaying equipment. The same problem may occur/have occurred with the two (now three) humus surveys conducted on the Black Fox Property.
- 2) Any future work planned on the property should be accompanied by at least 1:5,000 scale (preferably 1:2,500 scale) mapping to better understand the geology behind the humus anomalies.

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References

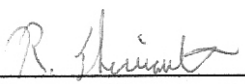
Walker, J.W.R., 1967. Geology of the Jackfish-Middleton Area, District of Thunder Bay, Geological Report 50, Maps 2107, 2112; Scale 1 in = 1mile

Qualifications

I, Ronnie Therriault, of #32 Hwy. 595, Kakabeka Falls, ON, do hereby certify that:

- 1) I am a graduate of The University of Western Ontario with a B.Sc. and in 2006 with an M.Sc., both in Geology.
- 2) I have practiced my profession continuously since 2006.
- 3) I am responsible for, or directly supervised, the writing of this report dated July 1, 2010. It is based on a study of the data and literature available on the Black Fox Property.
- 4) As of the date of this certificate, to the best of my knowledge, information and belief, the report contains all scientific and technical information that is required to be disclosed to make the report not misleading.

Dated this 1st day of July, 2010



Ronnie Therriault, M.Sc.

Kakabeka Falls, Ontario

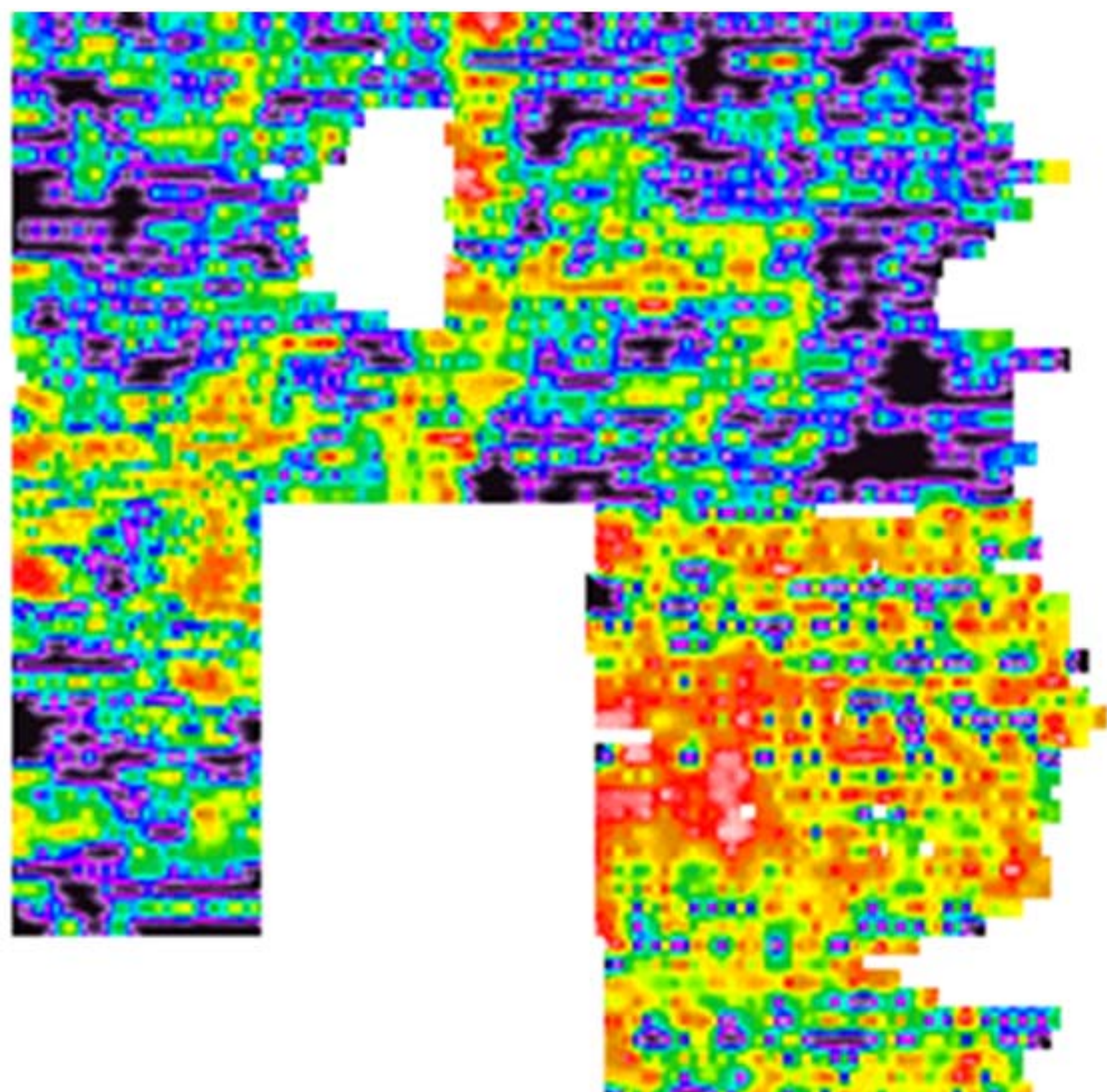
APPENDIX A – GRAB SAMPLE LOCATIONS

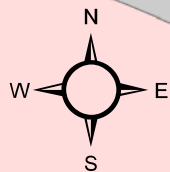
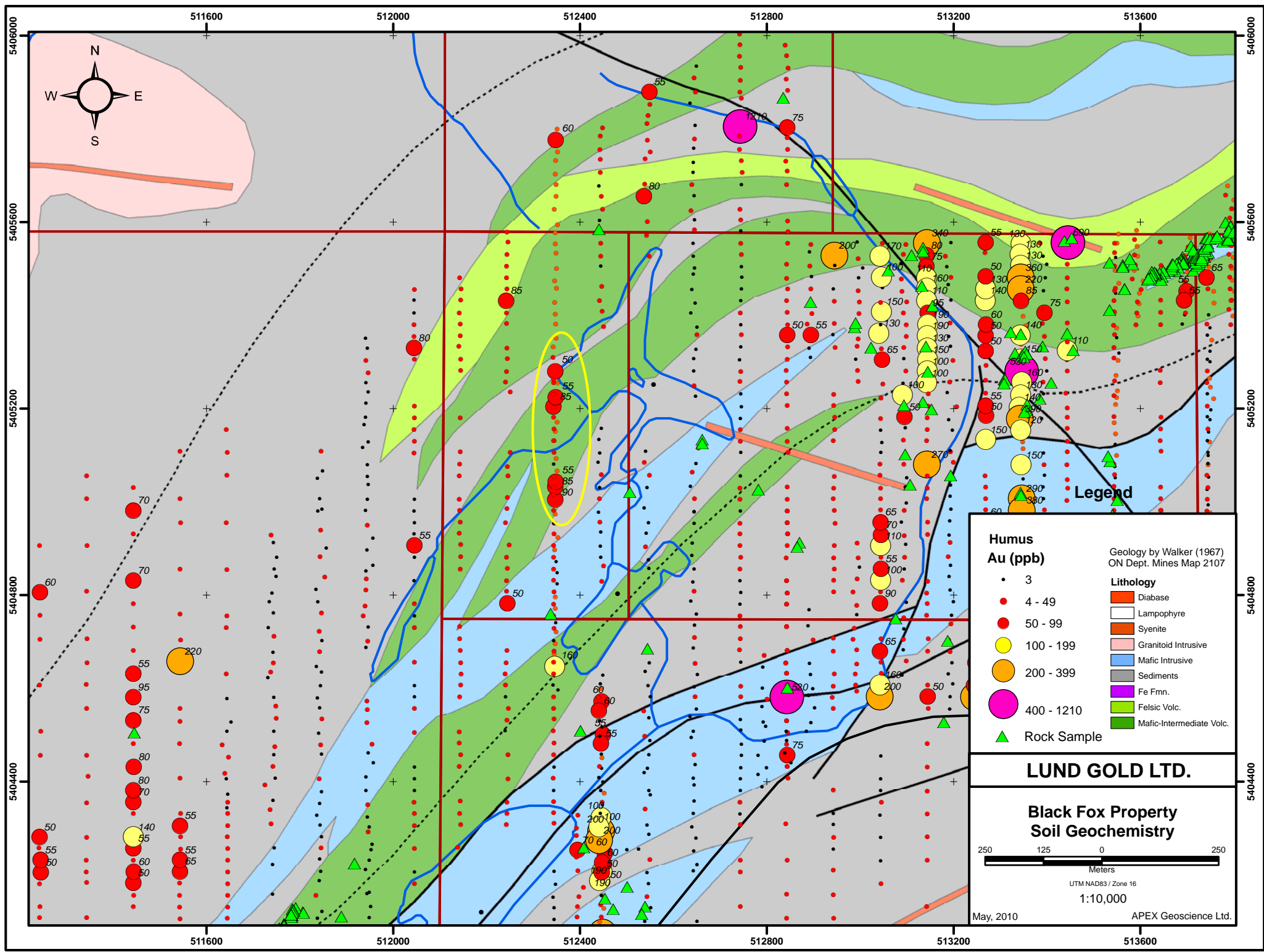
APPENDIX B – HUMUS SAMPLE LOCATIONS

Sample	Easting (NAD83_Zn 16)	Northing (NAD83_Zn 16)	Depth (cm)	Notes
10JKH001	512593	5405533	20	On edge of ridge (to south), o/c just below sample
10JKH002	512602	5405531	10	On ridge edge, o/c nearby
10JKH003	512601	5405505	10	On ridge edge, o/c nearby
10JKH004	512601	5405480	5	Taken on ridge above o/c
10JKH005	512598	5405449	15	On top of ridge, overlies o/c
10JKH006	512600	5405428	10	On west side of ridge
10JKH007	512606	5405401	10	On west side of ridge
10JKH008	512600	5405380	10	On west side of ridge
10JKH009	512601	5405352	15	Southern edge of ridge
10JKH010	512600	5405328	10	Top of ridge
10JKH011	512600	5405302	5	South edge of ridge
10JKH012	512594	5405277	15	Swampy area near lake, o/c or bldr
10JKH013	512403	5404970	15	On edge of swamp, o/c or bldr
10JKH014	512397	5405000	15	Flat ground
10JKH015	512396	5405025	10	Flat ground
10JKH016	512402	5405046	10	Edge of ridge, poor sample
10JKH017	512401	5405072	10	Flat area on edge of ridge to west
10JKH018	512395	5405102	10	On edge of ridge (to south), o/c
10JKH019	512400	5405123	15	Between swamp and ridge
10JKH020	512400	5405150	10	In swamp
10JKH021	512400	5405177	10	Near edge of swamp
10JKH022	512404	5405202	10	On lake edge
10JKH023	512400	5405349	10	On cliff edge near lake
10JKH024	512401	5405370	10	On ridge edge southside
10JKH025	512401	5405398	15	Flat area
10JKH026	512351	5405351	15	Flat area at bottom of cliff to west
10JKH027	512357	5405320	20	At base of cliff to north, not exact location of previous sample
10JKH028	512348	5405300	15	On edge of cliff to left, not same location as previous sample
10JKH029	512345	5405272	15	On edge of cliff, not at previous sample
10JKH030	512351	5405250	10	Lake edge, same sample spot
10JKH031	512351	5405233	15	Same spot as previous, shallow hill on lake edge
10JKH032	512350	5405195	20	Same spot, flat area
10JKH033	512344	5405172	5	Same spot, flat area, minor clay in sample
10JKH034	512345	5405150	20	Same spot, flat, o/c
10JKH035	512348	5405120	10	Same spot, flat, bit swampy/muddy
10JKH036	512345	5405100	10	Same spot, edge of small ridge
10JKH037	512354	5405072	10	Same spot, near creek, bit muddy
10JKH038	512343	5405050	15	same spot, level ground
10JKH039	512351	5405026	10	Same spot, edge of ridge, poor sample
10JKH040	512352	5405004	10	Same spot, top of ridge
10JKH041	512352	5404968	10	Same spot, bit muddy between topo highs
10JKH042	512349	5404949	10	Same spot, edge of hill, o/c
10JKH043	512356	5404921	20	Same spot, swampy area, flat
10JKH044	512302	5404871	15	On base of small ridge on topo low, flat
10JKH045	512301	5404899	15	Side of small ridge
10JKH046	512302	5404923	15	Small slope on o/c
10JKH047	512298	5404948	10	On ridge edge, ridge to east
10JKH048	512296	5404977	15	On edge of small ridge, o/c
10JKH049	512300	5405000	10	Flat area on small ridge, o/c
10JKH050	512302	5405024	10	On edge of moderately slopping ridge
10JKH051	512297	5405050	10	Flat ground
10JKH052	512298	5405071	20	Flat ground near creek
10JKH053	512297	5405097	15	Flat area, small ridge nearby
10JKH054	512304	5405125	15	On edge of small ridge
10JKH055	512300	5405148	15	Flat area
10JKH056	512301	5405175	20	Low area bound by ridges, bouldery area, poor sample
10JKH057	512304	5405200	15	Bottom edge of small ridge
10JKH058	512301	5405221	10	Low area bound by ridges
10JKH059	512300	5405249	5	Flat area, bit muddy
10JKH060	512300	5405275	5	Base of ridge, bouldery area

Sample	Easting (NAD83_Zn 16)	Northing (NAD83_Zn 16)	Depth (cm)	Notes
10JKH061	512301	5405298	15	Near ridge crest, humus brown rather than black
10JKH062	512300	5405322	15	Flat area, bit of silt in sample
10JKH063	512700	5405675	15	On edge of hill, hill to north, rock chips, near outcrop
10JKH064	512699	5405703	5	On small hill edge, boulder/outcrop
10JKH065	512700	5405729	10	On edge of small hill to south
10JKH066	512697	5405751	15	On edge of small hill above broken rock
10JKH067	512698	5405776	15	At top of ridge (to north)
10JKH068	512702	5405801	15	Edge of ridge (to south)
10JKH069	512701	5405826	15	Bottom of ridge, near swamp, bit muddy
10JKH070	512704	5405849	10	Edge of small hill above swamp, sample above boulders
10JKH071	512702	5405873	15	On hill edge, some silt in sample
10JKH072	512700	5405900	10	Flat area, draw between small ridges
10JKH073	512697	5405926	10	Bouldery on edge of hill
10JKH074	512751	5405920	10	At previous sample, flat area on ridge
10JKH075	512753	5405904	10	At previous sample, on edge of hill
10JKH076	512748	5405875	10	At previous sample, edge of ridge, bouldery
10JKH077	512748	5405842	10	AT previous sample, edge of ridge, bouldery
10JKH078a	512744	5405826	10	At previous sample, edge of ridge/swamp
10JKH078b	512744	5405826	10	At previous sample, edge of ridge/swamp
10JKH079	512751	5405797	15	Edge of swamp and edge of ridge, different spot
10JKH080	512748	5405766	10	Moderately sloping ridge edge, bouldery, several py rich boulders, different spot
10JKH081	512753	5405747	15	Same spot, edge of ridge
10JKH082	512750	5405723	10	On flat ridge top, on outcrop, same spot
10JKH083	512743	5405699	15	On outcrop, on slight slope, same spot
10JKH084	512750	5405667	15	Same spot ,on steep slope, bouldery area
10JKH085	512799	5405676	15	Flat area on edge of ridge, on outcrop/boulder
10JKH086	512800	5405700	20	Steep hill/ridge
10JKH087	512801	5405721	10	Moderate slope on ridge
10JKH088	512802	5405745	10	Moderate sloping area near base of ridge
10JKH089	512799	5405771	15	moderate slope near base of ridge
10JKH090	512801	5405798	10	on edge of swamp, muddy
10JKH091	512795	5405846	10	On edge of swamp, previous sample skipped
10JKH092	512796	5405874	10	On edge of moderate slope
10JKH093	512798	5405896	15	Flat area on ridge
10JKH094	512799	5405925	15	Flat area on ridge

APPENDIX C – RELAVENT FIGURES





Legend

**Humus
Au (ppb)**

- 3
- 4 - 49
- 50 - 99
- 100 - 199
- 200 - 399
- 400 - 1210
- ▲ Rock Sample

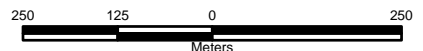
Geology by Walker (1967)
ON Dept. Mines Map 2107

Lithology

- Diabase
- Lampophyre
- Syenite
- Granitoid Intrusive
- Mafic Intrusive
- Sediments
- Fe Fmn.
- Felsic Volc.
- Mafic-Intermediate Volc.

LUND GOLD LTD.

**Black Fox Property
Soil Geochemistry**



UTM NAD83 / Zone 16

1:10,000

May, 2010

APEX Geoscience Ltd.