#### **Geological Report**

on the

Trixie Claims (1-2)

at

the Beverly Lake Property (NTS Mapsheet Acland Creek 095D/05) Claim Grant Numbers YD63517-YD63518 Registered Owner: Michael Burns Yukon Territory  $\frac{123456}{0}$ RECEIVED  $\frac{1223456}{0}$ RECEIVED  $\frac{1000}{0}$ REC

Property Centroid: Camp Location:

9 V 570668 / 6705830 9 V 570556 / 6705647

÷

. I

from

#### June 16, 2011 to June 18, 2011

for

#### Mackevoy Geosciences Ltd.

by

### Michael G.G. Burns, M.Sc. Candidate

#### Allison Aurora Brand, M,Sc.

For:

#### Mackevoy Geosciences Ltd.

June 22, 2011

**0953**63

### TABLE OF CONTENTS

1. Introduction	3
2. Location and Accessibility	3
3. Property History	6
4. Regional Geology	7
5. Property Geology	. 8
6. Current Mineral Exploration	10
6.1 Prospecting and sampling	10
7. Conclusions and Recommendations	13
Statement of Qualifications	13
Statement of Expenditures	15
References	16

# List of Figures

Fig. 2.1. Beverly Lake Camp Location Map		5
Fig. 2.2. Trixie1 and Trixie2 Claim Location Map		6
Fig. 5.1. Property Geology Map.	्. <del>त</del>	9
Fig. 6.1. Sample Location Map	Error! Bookmark not defined	d.

## List of Tables

Table 2.1. C	Claim informatio	n of the Trixie	Claims	• • • • • • • • • • • • • • • • • • • •		7
Table 6.1. S	ample Locations	and description	ns (UTM Zone	10, Nad 83)	1(	0-11

### 1. Introduction

The Beverly Lake Property (NTS mapsheet 095D/05; UTM Zone 9 V 570668 / 6705830) is located in the Watson Lake Mining District of the southern Yukon, approximately 8 km southeast of Hulse Lake and the Hyland Gold property. It consists of 2 contiguous mineral claims, staked on July 29, 2010 and recorded on July 30, 2010 in Watson Lake. The Trixie claims, also known as the Beverly Lake property, were staked to cover Lithium bearing pegmatite dyke float trail and subcrop discovered during the July 2010 program. This report summarizes the follow up work that was conducted during June of 2011 to assess the extent of mineralization and rare earth element and gold potential on the claims. The work preformed was funded by Mackevoy Geosciences Ltd.

### 2. Location and Accessibility

The crew drove from Prince George to the abandoned town of Smith River B.C. by truck where a camp was set up on the west side of the airstrip. The Trixie claims are located within 8km SE of the Highland Gold property camp that is situated on the south shore of Hulse Lake. The Highland Gold camp is serviceable via a winter road from Watson Lake or by float plane. For the June 2011 fieldwork program, access to the property was facilitated by a helicopter based out of the Smith River airstrip in NE British Columbia. By air, the Trixie claims are approximately 97 km to the NW of the Smith River airstrip. A large grassy meadow at the north end of Beverly Lake was used as a helicopter landing location. A suggestion for future work is to stage the program out of Hulse Lake where supplies can be flown in via float plane from Watson Lake and then moved to the property by helicopter from Hulse Lake.

The area is forested with numerous coniferous trees and the occasional birch at lower elevations. Abundant dwarf birch occurs on the steeper slopes and the vegetation is quite dense, which limits the range of work that can be completed on foot. At higher elevations, on top of peaks, and in saddles, the vegetation is much thinner; trees are rare and the ground is mossy.

a posterior ataxa. A gasta A success a s Success



Fig. 2.1 Beverly Lake Camp Location Map.

(c) record at the first second state of the second approximation of app first second se Second se Second s Second seco

Fig. 2.2 Trixie1 and Trixie2 Claim Location Map.

•



kan na selaka (pagawaka) a ganaka (kanaka) kanaka (kanaka) kanaka (kanaka) (kanaka). Taka kanaka

Table 2.1 Claim information of the Trixie claims.

Grant number	Name	Number	Claim Owner	Expiry date
YD63518	TRIXIE	2	M. Burns	7/30/2011
YD63517	TRIXIE	1	M. Burns	7/30/2011

# 3. Historical Work

The 095D mapsheet has seen little exploration compared to other areas in the Yukon due to limited access and limited public geoscience data. In the early 1970's the government sponsored a mapping project in the Flat River (Gabrielse, 1973). Heffernan (2004) described a regional study of mid-Cretaceous intrusions that included parts of the Coal and Flat Rivers. The Mineral, Energy, and Resource Assessment (MERA) study by Wright et al. (2007) covered some of the area and included work by Rasmussen et al. (2007), Yuvan et al. (2007) and Caron et al. (2007). The most recent work in the area was conducted by the YGS in 2009 and 2010; the project consisted of an extensive mapping project on mapsheet 095D by Pigage et al. (2010).

Industry exploration was conducted by "Archer Cathro" in the late 1970's and early 1980's, primarily for tungsten mineralization. During the course of their exploration, they identified several granite outcrops that were not included on regional geological maps until recently (Pigage et al., 2009). Recent work by industry has focused on gold mineralization in the vicinity of the Hyland Gold claims (e.g., Jones, 1997).

A small 3 person camp and exploration program was operated by Mackevoy Geosciences Ltd. from July 26-29, 2010 to investigate W anomalies and regional magnetic anomalies. The 2010 field work was supported by a Focused Regional Module YMIP grant. Work completed during the YMIP funded program consisted of handheld radiometrics (scintillometer & spectrometer) survey, a magnetometer survey, geological mapping, prospecting, stream sediment sampling, and rock sampling. A localized float trail of lithium bearing pegmatite and an outcrop of a large 3-4m wide quartz vein was discovered on the East side of the small gully north of Beverly Lake. The pegmatite and surrounding quartz veins were sampled and sent for assay. Two claims were staked to cover the pegmatite and large quartz veins at the end of the 2010 field program. Prior to

and the second state of the second stat

this, no work had been conducted in the area now covered by the Trixie claims. The closest major discovery in the area is the intrusion related gold project known as the Hyland Gold property, 8km to the NW. Diamond drilling was taking place at the Hyland Gold project during the July 2010 field season.

## 4. Regional Geology

The geology of the Upper Coal River is dominated by rocks of the eastern margin of the Selwyn basin and mid-Cretaceous granitic intrusions. The marine sedimentary rocks range in age from Proterozoic to Devonian and in general grade from clastic sediments to the west (Crow Formation of the Selwyn Basin) to carbonate sediments in the east (McDonald Platform). Intrusive rocks of the Upper Coal River are dominated by the Upper Coal Batholith whose main lobe crosses into the NWT; smaller plutons are periodically exposed along the length of the watershed divide.

Granitoids in the area are variably evolved and range from homogenous equigranular granodiorite to multi-stage intrusives which can contain tourmaline- and beryl-bearing two mica granites, pegmatite dykes, aplites and quartz veins. Cu-Pb-Zn skarns are located in the area and tungsten-bearing skarns are located along the margins of some of the plutons. Work by Rasmussen et al. (2007) and Bezzola (2009) suggests that there may be a younger intrusive suite that weathers recessively.

The main unit encountered during the field work was the Hyland Group. A description of this unit (from Pigage et al., 2009) follows:

Vampire Formation-Narchilla Formation (Hyland Group) (Located at Beverly Lakes):

Dark grey to pale green, rusty tan-weathering, non-calcareous, pin-striped silty phyllite; lesser cream, quartzose sandstone and light grey-weathering siltstone; minor quartzose pebbly conglomerate to sandstone and grey, pebbled limestone; locally metamorphosed to biotite-garnet-staurolite schist: trace interbedded silky, non-calcareous, maroon phyllite. It is Neoproterozoic to Cambrian in age.

# 5. Property Geology

Mapping was conducted in July of 2010 (see Figure 5.1). GPS points were taken of key outcrop or float locations to ensure easy return to the area and accurate mapping. The property sits on the margin of a small magnetic anomaly visible on the regional magnetic airborne survey conducted by the Yukon Government.

Description of the rock types observed at Beverly Lake:

Granite: (all float) medium-grained, quartz, plagioclase, large biotite crystals, amphibole, small disseminated sulphides, titantite may be present in some locations.

Phyllitic schist: siliceous, small quartz eyes (several mm's across), abundant muscovite, calcite present between some layers. Colour varies (usually buff or slightly reddish, but can be grey, white etc).

Schist: siliceous, migrating crystal boundaries, possible fluid inclusions, chlorite alteration, contains pyrite, weathering to limonite in some areas, abundant quartz veins.

Pegmatite: coarse-grained, contains lepidolite, quartz, feldspar, lamps bright orange with a UV light, possible scapolite, dull blue albite

Metagranite/granodiorite: Similar to the granite, but with slightly less quartz and it has been slightly more oxidized. Contains a green alteration mineral (poss. epidote)

Quartzite: almost purely sub-rounded quartz grains.



# 6. Current Mineral Exploration

#### 6.1 Prospecting and sampling

The Trixie Project was designed to follow up on the previous year's exploration results and the discovery of the Li bearing pegmatite. The proximity to the Highland Gold property and the occurrences of large quartz veins and pegmatite rocks suggest that the Trixie claims may be on the fringe of an intrusion related mineralization zone.

Rock sampling, hand trenching and prospecting was conducted to determine the extent of the existing quartz veins and pegmatite sub crop float, and whether additional occurrences are present.

The quartz veining within the claims consists of large (3-4m wide) massive quartz which in places was observed to parallel the foliation of the quartz-feldspathic schist host rock. The largest vein can be traced for roughly 30m upslope and multiple cm scale veins occur in the host rock. Internally, the quartz vein has small vugs with mm-cm scale euhedral quartz glassy quartz crystals and small flaky muscovite likely of wall rock origin. Chip samples were taken across the quartz vein which appears to be visually barren.

The Li pegmatite occurs as a subcrop float trail of medium sized 10-40 lb angular boulders which is traceable for roughly 50m upslope. Samples containing wall rock contacts were used to determine that the pegmatite dyke cross cuts foliation and bedding, unlike the quartz veins which parallel foliation in the country rock. The pegmatite contains mainly quartz, vibrant pink lepidolite, a rusty weathered mineral (possibly altered spodumene), abundant albite metasomatism, black tourmaline and feldspar. Samples of the albite rich and quartz - lepidolite bearing phases were taken and sent for assay.

Hand trenching in addition to moss stripping was conducted up slope for roughly 20m in order to expose a float trail of angular pegmatite boulders. The trench was dug at the top extent of the float trail and reached permafrost at depths greater than 2 feet. The trenching was terminated in permafrost and bedrock exposure was never reached. Samples of the angular float were taken for assay and petrographic study.

Prospecting on the West side of the gully did not locate continuance of the pegmatite dyke and a fault is interpreted to run through the sharp gully that extends north from Beverly Lake.

		Qtz Vein in gully, sampled across vein.	1		
		Thickness of roughly 20ft. Cross cuts			
		medium grained quartzofeldspathic			
		shist. Samples are from outcrop and			
	le ve ve se	subcrop are vuggy qtz with geothite +			
		mica alteration. Also collected fluid			
		inclusion samples. Pyrite cubes along			
11-MGB-112	rock	wall rock contact within qtz.	9 V	570644	6705805
	Geo	lineation measurement in qtz feldspar			
11-MGB-113	point	schist. 6->004, foliation> 220/10	9 V	570636	6705781
	rock	lepidolite, albite, qtz subcrop-float trail.	1		
		Sampled are the qtz albite rich pieces,			
		70% albite alteration with 2ndary			
		porosity. In places the albite is heavily			
11-MGB-114		weathered to clay. Minor lepidolite	9 V	570675	6705817
	rock	qtz lepidolite rich sample, less albite.			
		Large sample (mikes sample) plus			
11-MGB-115		bagged piece	9 V	570677	6705816
	rock	samples of contact btwn qtz feldspar			
		schist and pegmatite with >2mm long			
		tourmaline (black) well oriented along			
		country rock lineations. Commonly			
		exists on a thin 2cm zone into the host			
11-MGB-116		rock.	9 V	570668	6705830
	Geo	outcrop cliffs on W side of gully, .5m			
	point	beds of qtz feldsar schist to ss. Bedding			
11-MGB-117		150/5, lineations 20>098	9 V	570527	6705799

### Table 6.1 Sample locations, and descriptions

8

\*

Classical Representation of the second state of the descent of the second state of

Figure 6.1 Sample Location Map

\*

е с



vare en El destrik ligende herse elements al la construction de la construction de la construction de la const Transferencia

# 7. Conclusions and Recommendations

The following are recommended to better assess the mineralization potential at the Trixie Property:

- Investigate / prospect:
  - o the remainder of the claim area for additional occurences
  - o the margins of the magnetic anomaly to the West of the claim group
- Systematically conduct:
  - A gridded soil survey across the property
- Conduct additional mineralogical and petrographic studies of the pegmatite and fluid inclusion studies of the quartz vein samples to determine the potential to host mineralization

The execution of these recommendations will lead to a greater understanding of the geological settings of the pegmatite and quartz vein occurences, distribution, and mineralogical characteristics of the pegmatite. This will help determine rare earth, Ta, Nb and W potential. This will provide the necessary framework from which to make decisions on the nature of more comprehensive exploration, such as continued trenching, and diamond drilling.

# Statement of Qualifications

I, Michael G.G. Burns of 3579 College St., New Hazelton, British Columbia, Canada do hereby certify that I am a geologist and:

(a) I am a graduate of the University of Victoria with a Bachelor of Science (hons)
Degree in Earth and Ocean Sciences (2010). I am currently enrolled in a Master's of
Science Degree in Earth Sciences at Laurentian University, Sudbury, Ontario.

(b) I have practiced my profession continuously since 2007 and have direct experience in the exploration and development of gemstones, copper, tantalum, tin, lithium, gold, uranium, tungsten, and rare earth elements in Yukon, Northwest Territories and British Columbia, Canada.

(c) I directly participated in the field exploration conducted by Mackevoy

Geosciences Ltd. in the Yukon and personally visited all areas mentioned.

Mush 15

Michael Burns, M.Sc. Candidate

I, Allison Brand, graduated from The University of British Columbia in 2006 with a B.Sc. in geology (Honours) and in 2009 with a M.Sc. in Geology. I have practiced my profession as a geologist since 2006 and have worked on mineral exploration projects

throughout Canada. 6. V\_\_\_\_

Allison Brand, M.Sc.

# Statement of Expenditures

81 +

\*

	Total
Field Wages -3 days (1 senior geologist @ \$625 / day, 1	
senior geologist @ \$562.5 / day)	\$ 3562.5
Report Writing and Interpretation (1 day @ 562.5 / day))	\$ 562.5
Helicopter flight time	\$ 1,417.00
Helicopter Fuel	\$787.5
Truck Rental	\$ 300.00
Truck Fuel	\$125.00
Daily Field Expenses (@\$100 / person-day)	\$600.00
Shipping Samples (cost to be determined)	\$0.00
Assays – (cost to be determined)	\$0.00
Total Cost	\$ 7354.50

### References

- Bezzola, M., 2009. A Petrographic and Geochemical Study of Mid Cretaceous and Possible Tertiary Intrusions in the Southeastern Selwyn Basin, Yukon (NTS 95E). B.Sc. Thesis, University of Victoria.
- Caron, M-E., Grasby, S.E., & Ryan, M.C., 2007: Spring geochemistry: A tool for exploration in the South Nahanni River basin of the Mackenzie Mountains, Northwest Territories, in Mineral and Energy Resource Assessment of the Greater Nahanni Ecosystem Under Consideration for the Expansion of the Nahanni National Park Reserve, Northwest Territories, (eds.) D.F. Wright, D. Lemkow, and J.R. Harris; Geological Survey of Canada, Open File 5344, p. 31-74
- Heffernan, R.S., 2004: Temporal, geochemical, isotopic and metallogenic studies of mid-Cretaceous magmatism in the Tintina Gold Province, southeastern Yukon and southwestern Northwest Territories, Canada. M.Sc. Thesis, University of British Columbia, British Columbia, Canada, 83 p.
- Heffernan, R.S., Mortensen, J.K., Gabites, J.E. & Sterenberg, V., 2004: Lead isotope signatures of Tintina Gold Province intrusions and associated mineral deposits from southeastern Yukon and southwestern Northwest Territories: Implications for exploration in the southeastern Tintina Gold Province. In: Yukon Exploration and Geology 2004, D.S. Emond, L.L. Lewis and G.D. Bradshaw (eds.), Yukon Geological Survey, p. 121-128.
- Jones, M.I., 1997. Yukon Mineral Assessment Report #093634
- Pigage, L.C., 2009. Bedrock geology of NTS 95C/5 (Pool Creek) and NTS 95D/8 map sheets, southeast Yukon. Bulletin 16, 150 p.
- Pigage, L.C., Abbott, J.G. and Roots, C.F., 2010. Bedrock geology of Coal River map area (NTS 95D), Yukon (1:250 000 scale). Yukon Geological Survey, Open File 2010.
- Rasmussen, K.L., Mortensen, J.K., Falck, H. & Ullrich, T.D., 2007: The potential for intrusion-related mineralization within the South Nahanni River MERA area, Selwyn and Mackenzie Mountains, Northwest Territories, in Mineral and Energy Resource Assessment of the Greater Nahanni Ecosystem Under Consideration for the Expansion of the Nahanni National Park Reserve, Northwest Territories; Geological Survey of Canada, Open File 5344, p. 203-278.

Wright, D.F., Lemkow, D. & Harris, J.R., 2007: Mineral and Energy Resource Assessment of the Greater Nahanni Ecosystem Under Consideration for the Expansion of the Nahanni National park Reserve, Northwest Territories. Geological Survey of Canada, Open File 5344, 1DVD

÷,

Yuvan, J., Shelton, K., & Falck, H., 2007: Geochemical investigations of the high-grade quartz-scheelite veins of the Cantung mine, Northwest Territories, in Mineral and Energy Resource Assessment of the Greater Nahanni Ecosystem Under Consideration for the Expansion of the Nahanni National Park Reserve, Northwest Territories; Geological Survey of Canada, Open File 5344, p. 177-190.

Sample	Туре	Description	Datum	Easting	Northing	Au_ppm	Ag_ppm	Ba_ppm	Ce_ppm	Co_ppm	Cr_ppm	Cs_ppm
10-BCQ-100	Silt	None	9V	570647	6705844	0.006	0	445	60	5	40	8
10-MGB-071	Subcrop	Pegmatite	9V	570666	6705838	0.000	0	10	4	0	10	297
10-MGB-075	Soil	OVER Peg	9V	570860	6705818	0.000	0	625	54	7	70	15
10-MGB-080	Silt	intrusive focused	9V	570282	6707245	0.006	2	692	92	17	70	6
10-MGB-081	Silt	rusty creek	9V	569663	6707214	0.000	0	498	53	13	40	8
10-MGB-083	Silt	intrusive focused	9V	570592	6705604	0.007	0	674	107	13	70	5

Sample	Туре	Description	Datum	Easting	Northing	Cu_ppm	Dy_ppm	Er_ppm	Eu_ppm	Ga_ppm	Gd_ppm	Hf_ppm
10-BCQ-100	Silt	None	9V	570647	6705844	15	3	2	1	12	4	5
10-MGB-071	Subcrop	Pegmatite	9V	570666	6705838	0	0	0	0	35	0	3
10-MGB-075	Soil	OVER Peg	9V	570860	6705818	20	3	2	1	24	4	7
10-MGB-080	Silt	intrusive focused	9V	570282	6707245	1590	5	3	1	19	7	6
10-MGB-081	Silt	rusty creek	9V	569663	6707214	12	4	3	1	15	5	6
10-MGB-083	Silt	intrusive focused	9V	570592	6705604	28	5	3	2	21	7	7

Sample	Туре	Description	Datum	Easting	Northing	Ho_ppm	La_ppm	Lu_ppm	Mo_ppm	Nb_ppm	Nd_ppm	Ni_ppm
10-BCQ-100	Silt	None	9V	570647	6705844	1	33	0	0	8	24	13
10-MGB-071	Subcrop	Pegmatite	9V	570666	6705838	0	3	0	0	59	1	0
10-MGB-075	Soil	OVER Peg	9V	570860	6705818	1	29	0	0	35	21	20
10-MGB-080	Silt	intrusive focused	9V	570282	6707245	1	49	0	2	16	41	42
10-MGB-081	Silt	rusty creek	9V	569663	6707214	1	31	0	0	14	29	18
10-MGB-083	Silt	intrusive focused	9V	570592	6705604	1	56	0	0	18	47	31

Sample	Туре	Description	Datum	Easting	Northing	Pb_ppm	Pr_ppm	Rb_ppm	Sm_ppm	Sn_ppm	Sr_ppm	Ta_ppm
10-BCQ-100	Silt	None	9V	570647	6705844	13	7	75	4	3	116	1
10-MGB-071	Subcrop	Pegmatite	9V	570666	6705838	27	0	1515	0	73	6	55
10-MGB-075	Soil	OVER Peg	9V	570860	6705818	23	6	167	4	8	127	41
10-MGB-080	Silt	intrusive focused	9V	570282	6707245	16	11	122	7	3	162	6
10-MGB-081	Silt	rusty creek	9V	569663	6707214	10	7	54	5	2	271	1
10-MGB-083	Silt	intrusive focused	9V	570592	6705604	16	13	130	8	3	186	2

Sample	Туре	Description	Datum	Easting	Northing	Tb_ppm	Th_ppm	Tl_ppm	Tm_ppm	U_ppm	V_ppm	W_ppm
10-BCQ-100	Silt	None	9V	570647	6705844	1	9	0	0	4	67	5
10-MGB-071	Subcrop	Pegmatite	9V	570666	6705838	0	4	7	0	7	0	6
10-MGB-075	Soil	OVER Peg	9V	570860	6705818	1	11	1	0	3	103	6
10-MGB-080	Silt	intrusive focused	9V	570282	6707245	1	16	1	0	4	117	6
10-MGB-081	Silt	rusty creek	9V	569663	6707214	1	7	0	0	3	115	5
10-MGB-083	Silt	intrusive focused	9V	570592	6705604	1	18	1	0	3	96	6

Sample	Туре	Description	Datum	Easting	Northing	Y_ppm	Yb_ppm	Zn_ppm	Zr_ppm
10-BCQ-100	Silt	None	9V	570647	6705844	14	1	55	184
10-MGB-071	Subcrop	Pegmatite	9V	570666	6705838	2	0	24	20
10-MGB-075	Soil	OVER Peg	9V	570860	6705818	16	2	66	260
10-MGB-080	Silt	intrusive focused	9V	570282	6707245	27	3	119	211
10-MGB-081	Silt	rusty creek	9V	569663	6707214	26	2	101	220
10-MGB-083	Silt	intrusive focused	9V	570592	6705604	29	3	105	261