

ASSESSMENT REPORT

Goldlund Petrographic Analysis 2012

TAMAKA GOLD CORPORATION, GOLDLUND PROJECT

Kenora and Patricia Mining Divisions, Ontario, Canada

Township Areas:

Kenora Division: LAVAL and MACFIE

Patricia Division: ECHO, JORDAN, KABIK LAKE AREA, KEIKEWABIK LAKE AREA, MCAREE,
PICKEREL, VERMILLION and WEBB

NTS 52F/16SW, SE, NW, NE Centred at:

Latitude/Longitude: 49°52'28.21" N/ 92°19'08.00" W

UTM NAD 83, Zone 15, 548940 mE, 5524900 mN

Prepared For:



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Table of Contents

Table of Contents	1
List of Figures	2
List of Tables	2
1 Introduction	3
1.1 Introduction	3
1.2 Terms of Reference and Units	3
2 Property Description and Location	7
2.1 Property Location	7
2.2 Ontario Mineral Policy	7
3 Accessibility, Physiography, Infrastructure and First Nations	17
3.1 Accessibility.....	17
3.2 Physiography	17
3.2.1 Topography and Drainage.....	17
3.2.2 Climate	17
3.2.3 Flora and Fauna	17
3.3 Infrastructure	18
4 History	18
4.1.1 Quyta Showing.....	23
4.1.2 Jacobus Creek Showing	23
4.1.3 Eaglelund Showing	23
4.1.4 Miller Showing	23
4.1.5 Miles Showing	23
4.1.6 Other Showings	24
5 Geological Setting and Mineralization	24
5.1 Regional Geology.....	24
5.2 Structure.....	25
5.3 Property Geology	27
5.4 Mineralization	29
6 Deposit Types	30
7 Current Program	30
8 Sampling Method and Approach	31



9	Sample Preparation, Analysis and Security	31
10	Interpretations and Conclusions.....	31
11	Recommendations.....	32
12	References	33
	Appendix I Work Associated Costs	35
	Appendix II Statement of Qualifications.....	36
	Appendix III Sample Location & Field Descriptions.....	37
	Appendix IV GeoConsult Petrography/Mineralogy Report.....	38
	Appendix V Assay Certificates	39

List of Figures

Figure 1 – Goldlund Property Location Map.....	9
Figure 2 – Gold occurrences on the Goldlund Property	22
Figure 3 - Regional geology of Goldlund Property area (modified from McCracken, et al. 2010).....	26
Figure 4 - Geology of the Goldlund Property.....	28

List of Tables

Table 1 – Glossary of Terms	3
Table 2 – Units of Measure	4
Table 3 – Common Conversion Factors.....	6
Table 4 – Goldlund Property Unpatented Mining Claims	10
Table 5 – Historic exploration on the Goldlund Property	18
Table 6 – Historic surface and underground drilling on Goldlund Property	19
Table 7 –Summary of Resource Mineral Estimate	21



1 Introduction

1.1 Introduction

The Goldlund Property is located in the Kenora and Patricia mining districts and consists of 274 patented and unpatented mining claims, 2,919 units and 46,704 hectares. Historic exploration on the property dates back to the 1940's and includes surface exploration programs and underground development on the Goldlund deposit.

The deposit was mined in the 1980's by Camchib mining who recovered 18,000 ounces of gold from underground and open pit production of approximately 100,000 tons (90,718.5 t) at 0.14 oz/t (4.8 g/t) Au and 39,000 tons (35,380.2 t) at 0.15 oz/t Au (5.1 g/t) Au respectively. The Goldlund deposit is situated near the centre of the Goldlund Property and consists of en-echelon, gold-bearing quartz veins typically within competent felsic intrusives. The deposit is subdivided into seven zones which have a combined strike length to date of over 3 km.

During the winter of 2012, Tamaka Gold Corp. completed a petrographic and mineralogy study on the Goldlund deposit. A total of thirty-one samples were collected from previous drill holes across the ore body. The detailed study was contracted out to Dr. Eva Shandl of GeoConsult, and the complete analysis and interpretation are included in Appendix IV.

1.2 Terms of Reference and Units

This report was prepared at the request of Tamaka Gold, Corp. for the use of filing assessment as required under the Ontario Mining Act.

The Metric System or SI System is the primary system of measure and length used in this report and is generally expressed in kilometres, metres and centimetres; volume is expressed as cubic metres, mass expressed as metric tonnes, area as hectares, and zinc, copper and lead grades as percent or parts per million. The precious metal grades are generally expressed as grams/tonne but may also be in parts per billion or parts per million. Conversions from the SI or Metric System to the Imperial System are provided below and quoted where practical. Many of the geologic publications and more recent work assessment files now use the SI system but older work assessment files almost exclusively refer to the Imperial System. Metals and minerals acronyms in this report conform to mineral industry accepted usage and the reader is directed to an online source at www.maden.hacettepe.edu.tr/dmmrt/index.html.

Table 1 – Glossary of Terms

Term	Meaning	Term	Meaning
AEM	Airborne Electromagnetic	Na	Sodium
Ag	Silver	Na ₂ O	sodium oxide
Al	Aluminum	NAD 83	North American Datum of 1983
Al ₂ O ₃	aluminum oxide	NE	Northeast
AW	apparent width	NI	National Instrument
As	Arsenic	Ni	Nickel



Term	Meaning	Term	Meaning
Au	Gold	NSR	net smelter return
Ba	Barium	NTS	National Topographic System
Be	Beryllium	OGS	Ontario Geological Survey
Bi	Bismuth	P	Phosphorous
C	Carbon	P ₂ O ₅	phosphorous oxide
Ca	Calcium	Pb	Lead
CaO	calcium oxide	Pd	Palladium
Cd	Cadmium	pH	Acidity
Co	Cobalt	Pt	Platinum
CO ₂	carbon dioxide	QA/QC	Quality Assurance/Quality Control
Cr	Chromium	S	South
Cr ₂ O ₃	chromium oxide	S	Sulphur
Cu	Copper	Sb	Antimony
DDH	diamond drill hole	SE	Southeast
DW	drilled width	Se	Selenium
E	East	SiO ₂	silicon oxide
EM	electromagnetic	Sn	Tin
Fe	Iron	SO ₂	sulphur dioxide
Fe ₂ O ₃	iron oxide (ferric oxide-hematite)	Sr	Strontium
Fe ₃ O ₄	iron oxide (ferrous oxide-magnetite)	Sum	Summation
HLEM	horizontal loop electromagnetic	SW	Southwest
H ₂ O	hydrogen oxide (water)	Ti	Titanium
IP	induced polarization	TiO ₂	titanium dioxide
K	Potassium	TI	Thallium
K ₂ O	potassium oxide	TW	true width
Li	Lithium	U	Uranium
LOI	loss on ignition (total H ₂ O, CO ₂ and SO ₂ content)	U ₃ O ₈	uranium oxide (yellowcake)
Mg	Magnesium	UTM	Universal Transverse Mercator
MgO	magnesium oxide	V	Vanadium
Mn	Manganese	V ₂ O ₅	vanadium oxide
MNDMF	Ministry of Northern Development, Mines and Forestry	VLF	very low frequency
MnO	manganese oxide	VLF-EM	very low frequency-electromagnetic
Mo	Molybdenum	W	West
Mt	millions of tonnes	Y	Yttrium
N	North	Zn	Zinc
NW	northwest		

Table 2 – Units of Measure

Units of Measure	Abbreviation	Units of Measure	Abbreviation
Above mean sea level	amsl	Megabytes per second	Mb/s
Ampere	A	Megapascal	MPa
Annum (year)	a	Megavolt-ampere	MVA



Units of Measure	Abbreviation	Units of Measure	Abbreviation
Billion years ago	Ga	Megawatt	MW
British thermal unit	Btu	Metre	m
Candela	cd	Metres above sea level	masl
Carat	ct	Metres per minute	m/min
Carats per hundred tonnes	cpht	Metres per second	m/s
Carats per tonne	cpt	Metric ton (tonne)	t
Centimetre	cm	Micrometre (micron)	µm
Cubic centimetre	cm ³	Microsiemens (electrical)	µs
Cubic feet per second	ft ³ /s or cfs	Miles per hour	mph
Cubic foot	ft ³	Miles	mi
Cubic inch	in ³	Milliamperes	mA
Cubic metre	m ³	Milligram	mg
Cubic yard	yd ³	Milligrams per litre	mg/L
Day	d	Millilitre	mL
Days per week	d/wk	Millimetre	mm
Days per year (annum)	d/a	Million	M
Dead weight tonnes	DWT	Million tonnes	Mt
Decibel adjusted	dBa	Minute (plane angle)	'
Decibel	dB	Minute (time)	min
Degree	°	Month	mo
Degrees Celcius	°C	Newton	N
Degrees Fahrenheit	°F	Newtons per metre	N/m
Diameter	∅	Ohm (electrical)	Ω
Dry metric ton	dmt	Ounce	Oz
Foot	ft	Ounce per tonne	oz/t
Gallon	gal	Parts per billion	ppb
Gallons per minute (US)	gpm	Parts per million	ppm
Gigajoule	GJ	Pascal	Pa
Gram	g	Pascals per second	Pa/s
Grams per litre	g/L	Percent	%
Grams per tonne	g/t	Percent moisture (relative humidity)	% RH
Greater than	>	Phase (electrical)	Ph
Hectare (10,000 m ²)	ha	Pound(s)	lb
Hertz	Hz	Pounds per square inch	psi
Litre	L	Horsepower	hp
Hour	h (not hr)	Quart	qt
Hours per day	h/d	Revolutions per minute	rpm
Hours per week	h/wk	Second (plane angle)	"
Hours per year	h/a	Second (time)	s
Inch	"(symbol, not ")	Short ton (2,000 lb)	st
Joule	J	Short ton (US)	t
Joules per kilowatt-hour	J/kWh	Short tons per day (US)	tpd



Units of Measure	Abbreviation	Units of Measure	Abbreviation
Kelvin	K	Short tons per hour (US)	tph
Kilo (thousand)	k	Short tons per year (US)	tpy
Kilocalorie	kcal	Specific gravity	SG
Kilogram	kg	Square centimetre	cm ²
Kilograms per cubic metre	kg/m ³	Square foot	ft ²
Kilograms per hour	kg/h	Square inch	in ²
Kilograms per square metre	kg/m ²	Square kilometre	km ²
Kilojoule	kJ	Square metre	m ²
Kilometre	km	Thousand tonnes	kt
Kilometres per hour	km/h	Tonne (1,000kg)	t
Kilonewton	kN	Tonnes per day	t/d
Kilopascal	kPa	Tonnes per hour	t/h
Kilovolt	kV	Tonnes per year	t/a
Kilovolt-ampere	kVA	Total dissolved solids	TDS
Kilovolts	kV	Total suspended solids	TSS
Kilowatt	kW	Volt	V
Kilowatt hour	kWh	Week	wk
Kilowatt hours per short ton (US)	kWh/st	Weight/weight	w/w
Kilowatt hours per tonne (metric ton)	kWh/t	Wet metric ton	wmt
Kilowatt hours per year	kWh/a	Yard	yd
Kilowatts adjusted for motor efficiency	kWe	Year (annum)	a
Less than	<	Year	yr
Litres per minute	L/m	Weight Percent	Wt%

The term gram/tonne or g/t is expressed as “gram per tonne” where 1 gram/tonne = 1 ppm (part per million) = 1000 ppb (part per billion). Other abbreviations include ppb = parts per billion; ppm = parts per million; oz/t = ounce per short ton; Moz = million ounces; Mt = million tonne; t = tonne (1000 kilograms); SG = specific gravity; lb/t = pound/ton; and, st = short ton (2000 pounds).

Dollars are expressed in Canadian currency (CAD\$) unless otherwise noted. Base and certain industrial metal and mineral prices are stated as US\$ per tonne (US\$/t), precious metal prices are stated in US\$ per troy ounce (US\$/oz) and Uranium and certain industrial metal and mineral prices are stated in US\$ per pound (US\$/lb).

Unless otherwise noted, Universal Transverse Mercator (“UTM”) coordinates are provided in the datum of NAD 83, Zone 15 North.

Table 3 – Common Conversion Factors

To Convert From	To	Multiply By
Feet	Metres	0.3048



To Convert From	To	Multiply By
Metres	Feet	3.2808
Miles	Kilometres	1.6093
Kilometres	Miles	0.6214
Acres	Hectares	0.4047
Hectares	Acres	2.4711
Grams	Ounce (troy)	0.03215
Ounce (troy)	Grams	31.1035
Tonnes	Short tons	1.10231
Short tons	Tonnes	0.90718
Long tons	Kilograms	1016.046
Tonnes	Long tons	0.98421
Long tons	Tonnes	1.016046
Grams per tonne	Ounces (troy) per ton	0.02917
Ounces (troy) per ton	Grams per tonne	34.2857

2 Property Description and Location

2.1 Property Location

The Goldlund Property (“The Property”) is located within the Kenora and Patricia mining districts and spans ten townships. The townships include Laval, Echo, Macfie, Jordan, Kabik Lake Area, Keikewabik Lake Area, Mcaree, Pickerel, Vermillion, Webb. The Property is comprised of 274 mixed patented and non-patented contiguous claims, totaling 2,919 units and 46,704 hectares (Tables 4 and 5).

2.2 Ontario Mineral Policy

In Ontario, the ownership of surface rights and mining rights can vary from one property to another, particularly in regions where settlement and industry have a long history. The Canada Constitution Act, 1867 gave the then existing provinces, including Ontario, ownership of the public property in their boundaries (i.e. to the provincial Crown), which then issued grants of land known as “Crown Patents”. In 1913, the province of Ontario amended its Public Lands Act so that any title granted by the Crown before the amendment was deemed to include mining rights ownership. Any parcels of land granted by the Crown after May 6, 1913, may or may not include the mining rights depending on how the title is worded. Ontario’s current Public Lands Act authorizes the Minister of Natural Resources to sell or lease land. Today, the province’s policy is to reserve mining rights to the Crown in the majority of land grants (MNDM website www.mndm.gov.on.ca).

At the time of writing the core portions of the long established mining areas in Ontario, including the Project, are dominated by long standing Patented Mining Claims which may or may not include other ownership titles such as surface and timber rights. On Crown lands, and private lands that do not include mining rights, mineral exploration rights may be acquired by claim staking.

A staked mining claim provides the owner the exclusive right to explore for minerals. Once a claim is staked, the owner must perform exploration work to maintain it in good standing. This is called



assessment work. This work must amount to at least CAD\$400 per claim unit (1 unit = 16 ha) per year and be reported to the Mining Lands Section of the MNDMF. Assessment work is not required in the first year after recording a mining claim. Assessment work credits can be banked and used in future years. Under the MNDM system, each claim comes due on the anniversary of the date the claim was recorded. Claims are forfeited if the assessment work is not done. The mining rights affected by the forfeiture then return to the Crown and may be staked by another party.

Patented claims do not have assessment work expenditure or reporting requirements. These claims remain in good standing as long as applicable taxes are paid to the local municipality. The claim holder's right is only to explore for minerals on mining claims. Mining (i.e. extraction of the minerals) cannot take place until the claims are brought to lease. Mining leases are issued for the express purpose of undertaking mineral exploration, development or mining. The claim holder is entitled to a lease upon fulfilling the requirements of the Mining Act.

Currently mining leases are issued for 21-year terms and may be renewed for further 21-year periods. In the past however, lease terms for as long as 99 years were common. Leases can be issued for surface and mining rights, mining rights only or surface rights only. Once issued, the lessee pays an annual rent to the province. Further, prior to a mine coming into production, the lessee must comply with all applicable federal and provincial legislation.

Mining Licenses of Occupation ("MLO") were granted for portions of patented mining claims that lie beneath a water body, and in rare occasions for the land portion of the patent. Once issued, the MLO owner pays annual rent to the province of \$5/ha to maintain the MLO in perpetuity as they have no expiry date. In rare cases where the land and water portions of a patent are covered by an MLO they are no longer subject to annual property taxes and simply the annual rent of the MLO; in these cases if the MLO is not maintained in good standing the patented ground returns to the Crown. It should be noted that MLO's have been grandfathered into the new Mining Act and are no longer granted to mineral exploration companies in Ontario.

Ontario's Mining Act is the legislation which provides for acquiring land for mineral exploration and development. Ontario's MNDM administers the Mining Act, which sets out rules for all aspects of mineral exploration and development.

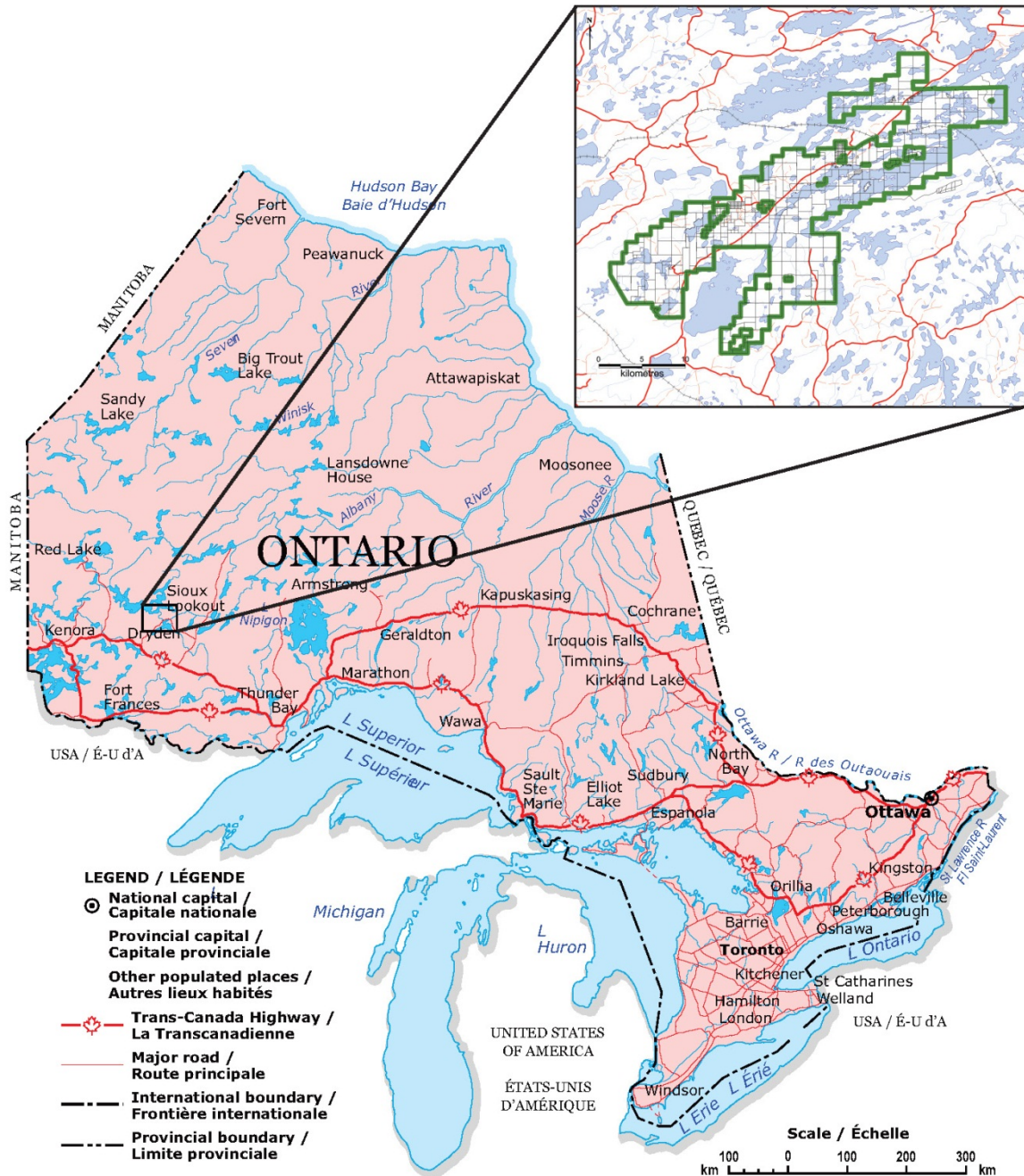


Figure 1 – Goldlund Property Location Map



Table 4 – Goldlund Property Unpatented Mining Claims

Township /Area	Claim Number	Recording Date	Percent Option	Work Required	Total Applied	Units	Ha
ECHO	1162943	2002-Aug-08	100%	\$800	\$10,400	2	32
ECHO	1166865	2000-Mar-29	100%	\$2,400	\$31,200	6	96
ECHO	1191761	2001-Nov-13	100%	\$1,200	\$22,800	3	48
ECHO	1191762	2001-Nov-23	100%	\$400	\$4,800	1	16
ECHO	1199268	2001-Nov-30	100%	\$1,600	\$20,800	4	64
ECHO	1247989	2002-Apr-15	100%	\$1,600	\$16,000	4	64
ECHO	3002714	2002-Aug-02	100%	\$800	\$8,800	2	32
ECHO	3002715	2002-Nov-18	100%	\$3,600	\$32,400	9	144
ECHO	3002721	2002-Sep-17	100%	\$400	\$5,600	1	16
ECHO	3004264	2002-Sep-17	100%	\$400	\$4,400	1	16
ECHO	3004265	2002-Nov-05	100%	\$677	\$25,723	6	96
ECHO	3019655	2005-Sep-30	100%	\$800	\$4,800	2	32
ECHO	3019657	2005-Sep-30	100%	\$1,600	\$9,600	4	64
ECHO	3019757	2005-Aug-11	100%	\$3,600	\$21,600	9	144
ECHO	3019764	2005-Aug-11	100%	\$5,600	\$36,400	14	224
ECHO	3019765	2005-Aug-11	100%	\$1,314	\$30,686	8	128
ECHO	3019766	2005-Aug-11	100%	\$4,800	\$28,800	12	192
ECHO	3019767	2005-Aug-11	100%	\$5,600	\$33,600	14	224
ECHO	3019768	2005-Aug-11	100%	\$4,000	\$24,000	10	160
ECHO	4200423	2006-Jan-13	100%	\$2,190	\$21,810	10	160
ECHO	4200424	2006-Jan-13	100%	\$5,200	\$26,000	13	208
ECHO	4200425	2006-Jan-13	100%	\$6,400	\$32,000	16	256
ECHO	4200426	2006-Jan-13	100%	\$1,600	\$8,000	4	64
ECHO	4200428	2006-Jan-13	100%	\$4,000	\$20,000	10	160
ECHO	4206886	2006-Sep-29	100%	\$6,000	\$30,000	15	240
ECHO	4256615	2010-Sep-28	100%	\$1,600	\$1,600	4	64
ECHO	4256616	2010-Sep-28	100%	\$6,400	\$6,400	16	256
ECHO	4263723	2012-Feb-09	100%	\$3,600	\$0	9	144
ECHO	4263724	2012-Feb-09	100%	\$3,200	\$0	8	128
ECHO	4263725	2012-Feb-09	100%	\$2,000	\$0	5	80
JORDAN	4256609	2010-Sep-28	100%	\$4,800	\$4,800	12	192
JORDAN	4256610	2010-Sep-28	100%	\$4,800	\$4,800	12	192
JORDAN	4256611	2010-Sep-28	100%	\$5,200	\$5,200	13	208
KABIK LAKE AREA	4200306	2006-Jan-13	100%	\$1,600	\$8,000	4	64
KABIK LAKE AREA	4200349	2006-Jan-13	100%	\$1,600	\$12,800	4	64
KABIK LAKE AREA	4200350	2006-Jan-13	100%	\$6,400	\$32,000	16	256
KABIK LAKE AREA	4206884	2006-Sep-29	100%	\$6,400	\$32,000	16	256
KABIK LAKE AREA	4261467	2011-Apr-26	100%	\$6,400	\$0	16	256
KABIK LAKE AREA	4261470	2011-Apr-26	100%	\$6,400	\$0	16	256



Township /Area	Claim Number	Recording Date	Percent Option	Work Required	Total Applied	Units	Ha
KABIK LAKE AREA	4261473	2011-Apr-26	100%	\$6,400	\$0	16	256
KEIKEWABIK LAKE AREA (PAT)	4200320	2006-Mar-20	100%	\$6,400	\$32,000	16	256
KEIKEWABIK LAKE AREA (PAT)	4200321	2006-Mar-20	100%	\$6,400	\$32,000	16	256
KEIKEWABIK LAKE AREA (PAT)	4200325	2006-Mar-20	100%	\$6,400	\$32,000	16	256
KEIKEWABIK LAKE AREA (PAT)	4200326	2006-Mar-20	100%	\$5,200	\$26,000	13	208
KEIKEWABIK LAKE AREA (PAT)	4200327	2006-Mar-20	100%	\$6,400	\$32,000	16	256
KEIKEWABIK LAKE AREA (PAT)	4200328	2006-Mar-20	100%	\$6,400	\$32,000	16	256
KEIKEWABIK LAKE AREA (PAT)	4200329	2006-Mar-20	100%	\$6,400	\$32,000	16	256
KEIKEWABIK LAKE AREA (PAT)	4200330	2006-Mar-20	100%	\$6,400	\$32,000	16	256
KEIKEWABIK LAKE AREA (PAT)	4200331	2006-Mar-20	100%	\$4,800	\$24,000	12	192
KEIKEWABIK LAKE AREA (PAT)	4200332	2006-Mar-20	100%	\$4,800	\$24,000	12	192
KEIKEWABIK LAKE AREA (PAT)	4206883	2006-Sep-29	100%	\$6,400	\$32,000	16	256
KEIKEWABIK LAKE AREA (PAT)	4243574	2008-Aug-15	100%	\$400	\$1,200	1	16
KEIKEWABIK LAKE AREA (PAT)	4253410	2011-Aug-26	100%	\$2,400	\$0	6	96
KEIKEWABIK LAKE AREA (PAT)	4261465	2011-Apr-26	100%	\$6,400	\$0	16	256
KEIKEWABIK LAKE AREA (PAT)	4261466	2011-Apr-26	100%	\$6,400	\$0	16	256
KEIKEWABIK LAKE AREA (PAT)	4261468	2011-Apr-26	100%	\$6,400	\$0	16	256
KEIKEWABIK LAKE AREA (PAT)	4261469	2011-Apr-26	100%	\$6,400	\$0	16	256
KEIKEWABIK LAKE AREA (PAT)	4261471	2011-Apr-26	100%	\$6,400	\$0	16	256
KEIKEWABIK LAKE AREA (PAT)	4261472	2011-Apr-26	100%	\$6,400	\$0	16	256
KEIKEWABIK LAKE AREA (PAT)	4261474	2011-Apr-26	100%	\$5,600	\$0	14	224
KEIKEWABIK LAKE AREA (PAT)	4261475	2011-Apr-26	100%	\$6,400	\$0	16	256
KEIKEWABIK LAKE AREA (PAT)	4261476	2011-Apr-26	100%	\$4,800	\$0	12	192
KEIKEWABIK LAKE AREA (PAT)	4261477	2011-Apr-26	100%	\$4,800	\$0	12	192
KEIKEWABIK LAKE AREA (PAT)	4261478	2011-Apr-26	100%	\$6,000	\$0	15	240
KEIKEWABIK LAKE AREA (PAT)	4261479	2011-Apr-26	100%	\$5,200	\$0	13	208
MCAREE	3019656	2005-Sep-30	100%	\$1,600	\$9,600	4	64
MCAREE	3019701	2005-Nov-04	100%	\$800	\$4,800	2	32



Township /Area	Claim Number	Recording Date	Percent Option	Work Required	Total Applied	Units	Ha
MCAREE	3019758	2005-Aug-05	100%	\$6,000	\$36,000	15	240
MCAREE	3019759	2005-Aug-05	100%	\$3,600	\$21,600	9	144
MCAREE	3019760	2005-Aug-05	100%	\$6,400	\$38,400	16	256
MCAREE	3019761	2005-Aug-05	100%	\$6,000	\$36,000	15	240
MCAREE	4200317	2006-Mar-20	100%	\$6,400	\$32,000	16	256
MCAREE	4200318	2006-Mar-20	100%	\$6,400	\$32,000	16	256
MCAREE	4200322	2006-Mar-20	100%	\$6,400	\$32,000	16	256
MCAREE	4200323	2006-Mar-20	100%	\$4,800	\$24,000	12	192
MCAREE	4200324	2006-Mar-20	100%	\$6,000	\$30,000	15	240
MCAREE	4206885	2006-Sep-29	100%	\$3,000	\$35,400	16	256
MCAREE	4224122	2010-Aug-30	100%	\$3,600	\$3,600	9	144
MCAREE	4241203	2008-Oct-27	100%	\$800	\$2,400	2	32
MCAREE	4253233	2011-Jan-24	100%	\$1,200	\$0	3	48
MCAREE	4254836	2010-Nov-02	100%	\$1,200	\$1,200	3	48
MCAREE	4256601	2010-Sep-28	100%	\$1,600	\$1,600	4	64
MCAREE	4256602	2010-Sep-28	100%	\$6,000	\$6,000	15	240
MCAREE	4256603	2010-Sep-28	100%	\$2,400	\$2,400	6	96
MCAREE	4256604	2010-Sep-28	100%	\$4,000	\$4,000	10	160
MCAREE	4256605	2010-Sep-28	100%	\$400	\$400	1	16
MCAREE	4256606	2010-Sep-28	100%	\$6,400	\$6,400	16	256
MCAREE	4256607	2010-Sep-28	100%	\$4,000	\$4,000	10	160
MCAREE	4256608	2010-Sep-28	100%	\$6,400	\$6,400	16	256
PICKEREL	3019755	2005-Aug-11	100%	\$2,800	\$16,800	7	112
PICKEREL	3019756	2005-Aug-11	100%	\$4,800	\$33,600	12	192
PICKEREL	4200304	2006-Jan-13	100%	\$3,600	\$18,000	9	144
PICKEREL	4200305	2006-Jan-13	100%	\$2,884	\$16,316	8	128
PICKEREL	4200342	2006-Jan-13	100%	\$6,400	\$38,400	16	256
PICKEREL	4200343	2006-Jan-13	100%	\$6,400	\$32,000	16	256
PICKEREL	4200344	2006-Jan-13	100%	\$6,400	\$38,400	16	256
PICKEREL	4200345	2006-Jan-13	100%	\$6,400	\$32,000	16	256
PICKEREL	4200346	2006-Jan-13	100%	\$1,600	\$8,000	4	64
PICKEREL	4200347	2006-Jan-13	100%	\$6,400	\$32,000	16	256
PICKEREL	4200348	2006-Jan-13	100%	\$6,400	\$32,000	16	256
PICKEREL	4200351	2006-Jan-13	100%	\$5,600	\$33,600	14	224
PICKEREL	4200429	2006-Jan-13	100%	\$5,600	\$28,000	14	224
PICKEREL	4200430	2006-Jan-13	100%	\$6,400	\$38,400	16	256
PICKEREL	4200431	2006-Jan-13	100%	\$2,400	\$12,000	6	96
PICKEREL	4200432	2006-Jan-13	100%	\$4,800	\$24,000	12	192
PICKEREL	4222883	2008-Jan-31	100%	\$800	\$3,200	2	32
VERMILION	4200307	2006-Jan-13	100%	\$2,400	\$12,000	6	96
WEBB	4253224	2011-Jan-24	100%	\$2,400	\$0	6	96



Township /Area	Claim Number	Recording Date	Percent Option	Work Required	Total Applied	Units	Ha
WEBB	4253225	2011-Jan-24	100%	\$6,400	\$0	16	256
WEBB	4253228	2011-Jan-24	100%	\$6,400	\$0	16	256
WEBB	4253229	2011-Jan-24	100%	\$6,400	\$0	16	256
WEBB	4253230	2011-Jan-24	100%	\$6,400	\$0	16	256
LAVAL	3012443	2005-Sep-30	100%	\$4,800	\$28,800	12	192
LAVAL	3012472	2005-Sep-30	100%	\$5,600	\$33,600	14	224
LAVAL	3012488	2005-Sep-30	100%	\$4,400	\$26,400	11	176
LAVAL	3012489	2005-Sep-30	100%	\$6,400	\$38,400	16	256
LAVAL	3012490	2005-Sep-30	100%	\$6,400	\$38,400	16	256
LAVAL	3012491	2005-Sep-30	100%	\$3,600	\$21,600	9	144
LAVAL	3012492	2005-Sep-30	100%	\$2,400	\$14,400	6	96
LAVAL	3012493	2005-Sep-30	100%	\$6,400	\$38,400	16	256
LAVAL	3012494	2005-Sep-30	100%	\$5,200	\$31,200	13	208
LAVAL	3012496	2005-Sep-30	100%	\$2,400	\$14,400	6	96
LAVAL	3019677	2005-Nov-24	100%	\$6,400	\$38,400	16	256
LAVAL	3019693	2005-Nov-24	100%	\$6,000	\$36,000	15	240
LAVAL	3019695	2005-Nov-24	100%	\$2,000	\$12,000	5	80
LAVAL	3019749	2005-Sep-30	100%	\$4,800	\$28,800	12	192
LAVAL	3019751	2005-Aug-11	100%	\$3,200	\$19,200	8	128
LAVAL	3019752	2005-Aug-11	100%	\$2,400	\$14,400	6	96
LAVAL	3019753	2005-Aug-11	100%	\$3,600	\$21,600	9	144
LAVAL	3019754	2005-Aug-11	100%	\$4,800	\$28,800	12	192
LAVAL	3019762	2005-Aug-05	100%	\$3,600	\$21,600	9	144
LAVAL	3019763	2005-Aug-05	100%	\$1,200	\$7,200	3	48
LAVAL	4200311	2006-Feb-16	100%	\$6,400	\$32,000	16	256
LAVAL	4200312	2006-Feb-16	100%	\$6,400	\$32,000	16	256
LAVAL	4214543	2008-Nov-14	100%	\$6,400	\$19,200	16	256
LAVAL	4224123	2010-Aug-30	100%	\$6,000	\$6,000	15	240
LAVAL	4224124	2010-Dec-02	100%	\$6,000	\$6,000	15	240
LAVAL	4241202	2008-Oct-31	100%	\$400	\$1,200	1	16
LAVAL	4253227	2011-Jan-24	100%	\$1,600	\$0	4	64
LAVAL	4253231	2011-Jan-24	100%	\$6,400	\$0	16	256
LAVAL	4253232	2011-Jan-24	100%	\$5,600	\$0	14	224
LAVAL	4256613	2010-Sep-28	100%	\$6,400	\$6,400	16	256
LAVAL	4256614	2010-Sep-28	100%	\$6,400	\$6,400	16	256
LAVAL	4256869	2012-Feb-09	100%	\$1,600	\$0	4	64
MACFIE	4200314	2006-Mar-20	100%	\$5,600	\$28,000	14	224
MACFIE	4200315	2006-Mar-20	100%	\$6,400	\$32,000	16	256
MACFIE	4200316	2006-Mar-20	100%	\$5,600	\$28,000	14	224
MACFIE	4224121	2010-Aug-30	100%	\$2,400	\$2,400	6	96
MACFIE	4253409	2011-Aug-08	100%	\$800	\$0	2	32



Township /Area	Claim Number	Recording Date	Percent Option	Work Required	Total Applied	Units	Ha
MACFIE	4261461	2011-Apr-26	100%	\$4,400	\$0	11	176
MACFIE	4261462	2011-Apr-26	100%	\$5,600	\$0	14	224
MACFIE	4261463	2011-Apr-26	100%	\$4,000	\$0	10	160
MACFIE	4261464	2011-Apr-26	100%	\$2,800	\$0	7	112
DRAYTON	4259026	2010-Nov-12	100%	\$2,400	\$0	6	96
DRAYTON	4259035	2010-Nov-12	100%	\$3,600	\$0	9	144
DRAYTON	4259039	2010-Nov-12	100%	\$3,600	\$0	9	144
DRAYTON	4259041	2010-Nov-12	100%	\$4,800	\$0	12	192
DRAYTON	4259042	2010-Nov-12	100%	\$6,400	\$0	16	256
DRAYTON	4259045	2010-Nov-12	100%	\$3,200	\$0	8	128
DRAYTON	4259046	2010-Nov-12	100%	\$6,400	\$0	16	256
DRAYTON	4259048	2010-Nov-12	100%	\$3,200	\$0	8	128
DRAYTON	4259049	2010-Nov-12	100%	\$6,400	\$0	16	256
DRAYTON	4259706	2010-Nov-10	100%	\$4,800	\$0	12	192
DRAYTON	4259708	2010-Nov-10	100%	\$6,400	\$0	16	256
DRAYTON	4259710	2010-Nov-10	100%	\$6,400	\$0	16	256
DRAYTON	4259711	2010-Nov-10	100%	\$6,400	\$0	16	256
DRAYTON	4259713	2010-Nov-10	100%	\$6,400	\$0	16	256
DRAYTON	4259714	2010-Nov-10	100%	\$6,400	\$0	16	256
DRAYTON	4262794	2011-Apr-18	100%	\$2,000	\$0	5	80
DRAYTON	4262795	2011-Apr-18	100%	\$3,200	\$0	8	128
JORDAN	4256223	2010-Nov-12	100%	\$2,800	\$0	7	112
JORDAN	4256224	2010-Nov-12	100%	\$4,800	\$0	12	192
JORDAN	4256225	2010-Nov-12	100%	\$6,400	\$0	16	256
JORDAN	4256226	2010-Nov-12	100%	\$3,200	\$0	8	128
JORDAN	4256235	2010-Nov-12	100%	\$3,200	\$0	8	128
JORDAN	4256236	2010-Nov-12	100%	\$6,400	\$0	16	256
JORDAN	4256237	2010-Nov-12	100%	\$4,800	\$0	12	192
JORDAN	4256238	2010-Nov-12	100%	\$3,200	\$0	8	128
JORDAN	4256239	2010-Nov-12	100%	\$6,400	\$0	16	256
JORDAN	4256240	2010-Nov-10	100%	\$6,400	\$0	16	256
JORDAN	4259021	2010-Nov-10	100%	\$4,800	\$0	12	192
JORDAN	4259703	2010-Nov-10	100%	\$6,400	\$0	16	256
JORDAN	4259704	2010-Nov-10	100%	\$2,400	\$0	6	96
JORDAN	4259705	2010-Nov-10	100%	\$6,400	\$0	16	256
JORDAN	4259707	2010-Nov-10	100%	\$6,400	\$0	16	256
JORDAN	4259709	2010-Nov-10	100%	\$6,400	\$0	16	256
JORDAN	4259712	2010-Nov-10	100%	\$3,200	\$0	8	128
JORDAN	4259715	2010-Nov-10	100%	\$2,000	\$0	5	80
JORDAN	4259716	2010-Nov-10	100%	\$1,200	\$0	3	48
JORDAN	4259717	2010-Nov-10	100%	\$1,200	\$0	3	48



Township /Area	Claim Number	Recording Date	Percent Option	Work Required	Total Applied	Units	Ha
JORDAN	4259718	2010-Nov-10	100%	\$3,200	\$0	8	128
JORDAN	4259719	2010-Nov-10	100%	\$2,400	\$0	6	96
JORDAN	4259720	2010-Nov-10	100%	\$2,000	\$0	5	80
JORDAN	4262783	2011-Apr-18	100%	\$3,200	\$0	8	128
JORDAN	4262784	2011-Apr-18	100%	\$3,200	\$0	8	128
JORDAN	4262785	2011-Apr-20	100%	\$6,400	\$0	16	256
KABIK LAKE AREA	4256201	2010-Nov-10	100%	\$2,400	\$0	6	96
KABIK LAKE AREA	4256202	2010-Nov-10	100%	\$5,600	\$0	14	224
KABIK LAKE AREA	4256203	2010-Nov-10	100%	\$4,800	\$0	12	192
KABIK LAKE AREA	4256204	2010-Nov-10	100%	\$6,400	\$0	16	256
KABIK LAKE AREA	4256205	2010-Nov-10	100%	\$6,400	\$0	16	256
KABIK LAKE AREA	4256206	2010-Nov-10	100%	\$6,400	\$0	16	256
KABIK LAKE AREA	4256207	2010-Nov-10	100%	\$3,200	\$0	8	128
KABIK LAKE AREA	4256208	2010-Nov-10	100%	\$6,400	\$0	16	256
KABIK LAKE AREA	4256211	2010-Nov-10	100%	\$1,600	\$0	4	64
KABIK LAKE AREA	4256212	2010-Nov-10	100%	\$2,400	\$0	6	96
KABIK LAKE AREA	4256213	2010-Nov-10	100%	\$4,000	\$0	10	160
KABIK LAKE AREA	4256214	2010-Nov-10	100%	\$3,600	\$0	9	144
KABIK LAKE AREA	4256215	2010-Nov-10	100%	\$3,200	\$0	8	128
KABIK LAKE AREA	4256216	2010-Nov-10	100%	\$5,200	\$0	13	208
KABIK LAKE AREA	4256217	2010-Nov-10	100%	\$3,200	\$0	8	128
KABIK LAKE AREA	4256218	2010-Nov-10	100%	\$4,800	\$0	12	192
KABIK LAKE AREA	4256219	2010-Nov-10	100%	\$4,800	\$0	12	192
KABIK LAKE AREA	4256220	2010-Nov-10	100%	\$3,200	\$0	8	128
KABIK LAKE AREA	4256221	2010-Nov-10	100%	\$3,600	\$0	9	144
KABIK LAKE AREA	4256222	2010-Nov-10	100%	\$3,200	\$0	8	128
KABIK LAKE AREA	4256228	2010-Nov-10	100%	\$6,400	\$0	16	256
KABIK LAKE AREA	4256229	2010-Nov-10	100%	\$2,400	\$0	6	96
KABIK LAKE AREA	4256230	2010-Nov-10	100%	\$6,400	\$0	16	256
KABIK LAKE AREA	4256231	2010-Nov-10	100%	\$3,200	\$0	8	128
KABIK LAKE AREA	4256232	2010-Nov-10	100%	\$3,200	\$0	8	128
KABIK LAKE AREA	4256234	2010-Nov-10	100%	\$4,800	\$0	12	192
KABIK LAKE AREA	4256241	2010-Nov-10	100%	\$4,800	\$0	12	192
KABIK LAKE AREA	4256242	2010-Nov-10	100%	\$3,600	\$0	9	144
KABIK LAKE AREA	4256243	2010-Nov-10	100%	\$4,800	\$0	12	192
KABIK LAKE AREA	4256872	2010-Oct-27	100%	\$3,200	\$0	8	128
KABIK LAKE AREA	4256873	2010-Oct-27	100%	\$3,200	\$0	8	128
KABIK LAKE AREA	4256875	2010-Oct-27	100%	\$3,200	\$0	8	128
KABIK LAKE AREA	4256876	2010-Oct-27	100%	\$6,400	\$0	16	256
KABIK LAKE AREA	4256878	2010-Oct-27	100%	\$3,200	\$0	8	128
KABIK LAKE AREA	4256879	2010-Oct-27	100%	\$6,400	\$0	16	256



Township /Area	Claim Number	Recording Date	Percent Option	Work Required	Total Applied	Units	Ha
KABIK LAKE AREA	4256880	2010-Oct-27	100%	\$1,600	\$0	4	64
KABIK LAKE AREA	4256882	2010-Nov-01	100%	\$3,200	\$0	8	128
KABIK LAKE AREA	4256883	2010-Nov-01	100%	\$6,400	\$0	16	256
KABIK LAKE AREA	4256888	2010-Nov-01	100%	\$6,400	\$0	16	256
KABIK LAKE AREA	4256889	2010-Oct-27	100%	\$6,400	\$0	16	256
KABIK LAKE AREA	4259023	2010-Nov-10	100%	\$2,400	\$0	6	96
KABIK LAKE AREA	4259024	2010-Nov-10	100%	\$4,800	\$0	12	192
KABIK LAKE AREA	4259025	2010-Nov-10	100%	\$6,400	\$0	16	256
KABIK LAKE AREA	4259032	2010-Nov-10	100%	\$4,800	\$0	12	192
KABIK LAKE AREA	4259033	2010-Nov-10	100%	\$4,800	\$0	12	192
KABIK LAKE AREA	4262781	2011-Apr-18	100%	\$1,600	\$0	4	64
KABIK LAKE AREA	4262782	2011-Apr-18	100%	\$3,200	\$0	8	128
KABIK LAKE AREA	4262791	2011-Apr-18	100%	\$800	\$0	2	32
KABIK LAKE AREA	4262792	2011-Apr-18	100%	\$800	\$0	2	32
KABIK LAKE AREA	4262793	2011-Apr-18	100%	\$2,400	\$0	6	96
PARNES LAKE AREA	4259022	2010-Nov-10	100%	\$4,800	\$0	12	192
PARNES LAKE AREA	4259027	2010-Nov-12	100%	\$4,800	\$0	12	192
PARNES LAKE AREA	4259028	2010-Nov-10	100%	\$6,400	\$0	16	256
PARNES LAKE AREA	4259029	2010-Nov-10	100%	\$4,800	\$0	12	192
PARNES LAKE AREA	4259030	2010-Nov-10	100%	\$4,800	\$0	12	192
PARNES LAKE AREA	4259031	2010-Nov-10	100%	\$2,400	\$0	6	96
PARNES LAKE AREA	4259036	2010-Nov-12	100%	\$6,400	\$0	16	256
PARNES LAKE AREA	4259037	2010-Nov-10	100%	\$6,400	\$0	16	256
PARNES LAKE AREA	4259043	2010-Nov-10	100%	\$6,400	\$0	16	256
PARNES LAKE AREA	4259047	2010-Nov-10	100%	\$6,400	\$0	16	256
PARNES LAKE AREA	4259050	2010-Nov-10	100%	\$6,400	\$0	16	256
PICKEREL	4256871	2010-Oct-27	100%	\$1,600	\$0	4	64
PICKEREL	4256874	2010-Oct-27	100%	\$3,200	\$0	8	128
PICKEREL	4256877	2010-Oct-27	100%	\$3,600	\$0	9	144
PICKEREL	4256881	2010-Oct-27	100%	\$2,400	\$0	6	96
PICKEREL	4256884	2010-Oct-27	100%	\$1,600	\$0	4	64
PICKEREL	4256885	2010-Oct-27	100%	\$1,600	\$0	4	64
PICKEREL	4256886	2010-Oct-27	100%	\$4,000	\$0	10	160
PICKEREL	4256887	2010-Oct-27	100%	\$6,400	\$0	16	256
VERMILION	4259701	2010-Nov-10	100%	\$6,400	\$0	16	256



Township /Area	Claim Number	Recording Date	Percent Option	Work Required	Total Applied	Units	Ha
VERMILION	4259702	2010-Nov-10	100%	\$6,400	\$0	16	256

3 Accessibility, Physiography, Infrastructure and First Nations

3.1 Accessibility

Access to the Project is via Ontario Provincial Highway 72, approximately 30 km from Dryden, ON and approximately 45 km southwest of Sioux Lookout, ON. A private all weather gravel road leads from this point to the Property. The road into the Property would require upgrading to sustain any form of mining operations, but is accessible by two-wheel drive vehicle for exploration.

Regularly scheduled passenger air service and charter flights are available to the towns of Dryden and Sioux Lookout.

3.2 Physiography

3.2.1 Topography and Drainage

The area has low relief covered with a number of small lakes and sparse coniferous forest with locally abundant outcrops. The elevation in the low-lying areas is in the order of 500 m above mean sea level. Vegetation consists predominantly of black spruce, balsam fir and tamarack trees, typical of the Canadian Shield. Parts of the areas are also covered by drumlins and by glacial till. Overburden cover ranges from 1 to 10 m.

3.2.2 Climate

The climate in this part of Northern Ontario is continental to subarctic. The mean temperature during the winter months is -17 degrees Celsius (°C) and the mean temperature during the summer months is 16°C. The average annual precipitation is approximately 690 millimetres (mm). The closest weather stations are located in the towns of Dryden and Sioux Lookout (Source: Meteorological Service of Canada).

3.2.3 Flora and Fauna

The Property is situated in the Northern Coniferous Section of the Boreal Forest Region of northwestern Ontario. Forest stands are typically mixed with a variety of species including black and white spruce with balsam fir, aspen, and birch. Jack pine stands occur in well drained coarse textured soil areas. Shrubs in the area include blueberries, Labrador tea and leather leaf.

Wildlife (mammals) typical of the region include moose, wolf, lynx, bobcat, fisher, marten, wolverine, river otter, least weasel, short-tail weasel, mink, snowshoe hare, red squirrel and beaver. Numerous species of birds are known to occur in the region.



3.3 Infrastructure

Local mining-related infrastructure is limited in the towns of Dryden and Sioux Lookout, which are dependent on pulp-and-paper and tourism industries.

There is some infrastructure at the site including an old mill and some mine buildings. During exploration, electrical power for local operations is obtained from diesel generators.

4 History

This summary of historic work is modified from the report “Technical Report and Resource Estimate on the KRP Deposit, KRP Project, Sioux Lookout, Ontario” by Todd McCracken, et al.

Exploration of the Project dates back to the 1940s. From the late 1940s to 1988, intermittent exploration was carried out by various companies mainly on five gold bearing zones. Past work included shaft sinking, driving a ramp and underground development, including drifting and crosscuts on four levels.

There was a major period of exploration in the area from 1946 to 1952, in response to the discovery of gold mineralization in the southeastern part of Echo Township. The historic Newlund and Windward gold deposits were discovered during this period.

The Newlund prospect saw extensive underground exploration (4,570 m of drifts and crosscuts, 6,220 m of diamond drilling) through five levels, via a 255 m deep shaft. The first level (200 ft) of the Newlund/Goldlund workings extends for over 3.2 km, connecting on the west with the 68 m shaft of the Windward prospect, crossing the entire Windward claim block (Page, 1984).

Virtually no work was carried out on the Echo Township gold prospects from 1952 to 1973. In 1974, Goldlund Mines Limited rehabilitated most of the surface facilities and re-sampled portions of the first and second levels (Page, 1984). In total, approximately 46,000 m (151,000 ft) of surface drilling has been completed in 506 holes, and more than 18,290 m (60,000 ft) of underground drilling has been completed in 466 holes. Table 5 shows the past exploration and development work completed by the various companies on the Project area. Table 6 displays statistics from the various drilling campaigns conducted by the different companies.

Table 5 – Historic exploration on the Goldlund Property

Year	Company	Type of Work					
		Geology	Geophysics	Trenching	Surface Sampling	Diamond Drilling	Und. Dev.
1941-47	Lunward Gold Mines					X	
1945, 47	Windward Gold Mines					X	
1950	Conecho Mines					X	
1946-50	East Lun Gold		X			X	X
1951,52	Newland						X



Year	Company	Type of Work					
		Geology	Geophysics	Trenching	Surface Sampling	Diamond Drilling	Und. Dev.
1971	Windfall Oil &	X				X	
1976-80	Goldlund Mines					X	
1980	Windfall Oils &						
1984	Goldlund Mines					X	
1987	Camreco Inc.		X	X	X	X	
1988	Camreco Inc.					X	X
1991, 92	Noranda	X	X	X		X	
1992	Camreco Inc.						
2003	Atikwa			X	X		
2003	Quartz Crystal Dryden			X	X		
2007-08	Tamaka					X	

Table 6 – Historic surface and underground drilling on Goldlund Property

Past Surface Drilling				
Year	Company	No. Holes	Amount (ft)	Amount (m)
1941	Lunward Gold Mines Ltd.	3	973	297
1942	Lunward Gold Mines Ltd.	25	6,494	1,979
1945	Lunward Gold Mines Ltd.	44	3,526	1,075
1946	Lunward Gold Mines Ltd.	77	28,925	8,816
1947	Lunward Gold Mines Ltd.	16	5,896	1,797
1947	Windward Gold Mines	18	8,247	2,514
1976	Goldlund Mines Limited	11	4,046	1,233
1977	Goldlund Mines Limited	6	1,452	443
1979	Goldlund Mines Limited	106	14,248	4,343
1980	Windfall Oils and Mines	67	24,202	7,377
1981	Goldlund Mines Limited	2	664	202
1984	Goldlund Mines Limited	6	814	248
1987	Camreco Inc.	24	23,718	7,229
1988	Camreco Inc.	65	24,345	7,420
1989	Camreco Inc.	33	3,088	941
1991	Noranda Exploration Co Ltd	3	658	201
2007	Tamaka	43	33,602	10,242
2008	Tamaka	66	62,250	18,974
2011	Tamaka	25	34,997	10,667
		640	186,293	85,998
Past Underground Drilling - 200 Level				
Year	Company	No. Holes	Amount (ft)	Amount (m)
1950	Newlund Mines Limited	40	6,175	1,882
1951	Newlund Mines Limited	22	3,858	1,176



1951	Windward Gold Mines	17	3,197	974
1952	Newlund Mines Limited	20	2,273	693
1973	Rayrock Mines Ltd.	22	2,150	655
1979	Goldlund Mines Ltd.	107	13,290	4,051
1980	Goldlund Mines Ltd.	26	2,136	651
1983	Goldlund Mines Ltd.	16	1,632	497
1984	Goldlund Mines Ltd.	24	3,736	1,139
		294	38,447	11,719
Past Underground Drilling - 350 Level				
Year	Company	No. Holes	Amount (ft)	Amount (m)
1951	Newlund Mines Limited	15	2,102	641
1952	Newlund Mines Limited	3	196	60
1973	Rayrock Mines Ltd.	19	2,607	795
1979	Goldlund Mines Ltd.	59	7,045	2,147
		96	11,950	3,642
<i>table continues...</i>				

Past Underground Drilling - 500 Level				
Year	Company	No. Holes	Amount (ft)	Amount (m)
1951	Newlund Mines Limited	18	2,257	688
1952	Newlund Mines Limited	15	1,296	395
1979	Goldlund Mines Ltd.	43	6,074	1,851
		76	9,627	2,934
Total Drilling on Project		1,081		93,626

From mid-1982 to early 1985, Camchib Mines operated an underground mine and an open pit mine above the first level of Zone 1 of the Project and processed material through the mill at the site. Pieterse (2005) has compiled production records that show underground mine production of approximately 100,000 tons (90,718.5 t) at an estimated grade of 0.14 oz/t (4.8 g/t) Au together with open pit production of approximately 39,000 tons (35,380.2 t), at an estimated grade of 0.15 oz/t Au (5.1 g/t). Plant records show that some 119,750 tons (108,635.4 t) were processed, with 18,000 ounces of recovered gold. The head-grade was 0.14 oz/t (4.8 g/t) Au and mill recovery was reported to be 86.6%. In total, some 320 m (1,050 ft) of shaft sinking, 420 m (1,385) ft of driving a ramp and approximately 6000 m (19,600 ft) of drifting and crosscuts were developed for the production.

Prior to the drilling reported on herein, Tetra Tech WEI Inc., (formerly Wardrop Engineering Inc.) completed a 43-101 compliant resource calculation on the Goldlund Property in October 2010. Applying a gold cut-off grade of 0.5 g/t, McCracken reported the deposit contains a Measured and Indicated Resource of ~6.8 million tonnes at an average grade of 1.73 g/t Au. The Inferred Resource contains 18.9 million tonnes at an average grade of 1.02 g/t Au. This is the only historical resource calculation on the Property known to the author. Table 7 summarizes the mineral estimate and is also taken from the report “Technical Report and Resource Estimate on the KRP Deposit, KRP Project, Sioux Lookout, Ontario” by Todd McCracken.



Table 7 –Summary of Resource Mineral Estimate

Zone	Classification	Tonnes	Au (g/t)	Ounces
Zone 1	Measured	3,928,951	1.85	233,690
Total	Measured	3,928,951	1.85	233,690
Zone	Classification	Tonnes	Au (g/t)	Ounces
Zone 1	Indicated	2,513,273	1.62	130,902
Zone 2	Indicated	176,354	1.17	6,634
Zone 3	Indicated	149,487	1.21	5,815
Total	Indicated	2,839,114	1.57	143,351
Total	Meas+Ind	6,768,064	1.73	377,041
used 0.5 g/t cutoff				
*Note: Zone 7 resource is material located within the Echo Claim boundary				
Zone	Classification	Tonnes	Au (g/t)	Ounces
Zone 1	Inferred	1,148,695	1.28	47,272
Zone 2	Inferred	1,557,063	1.12	59,072
Zone 3	Inferred	3,908,552	0.73	91,734
Zone 4	Inferred	4,520,161	0.81	117,715
Zone 5	Inferred	735,457	0.63	14,897
Zone 6	Inferred	373,565	1.02	12,251
Zone 7	Inferred	6,661,432	1.33	284,847
Total	Inferred	18,904,926	1.02	627,787
used 0.5 g/t cutoff				
*Note: Zone 7 resource is material located within the Echo Claim boundary				

The bulk of historic exploration has focused on the Goldlund deposit and its immediate area, but there are numerous other known gold showings on the Property (see Figure 2). Historic exploration efforts for some of these showings are summarized below.

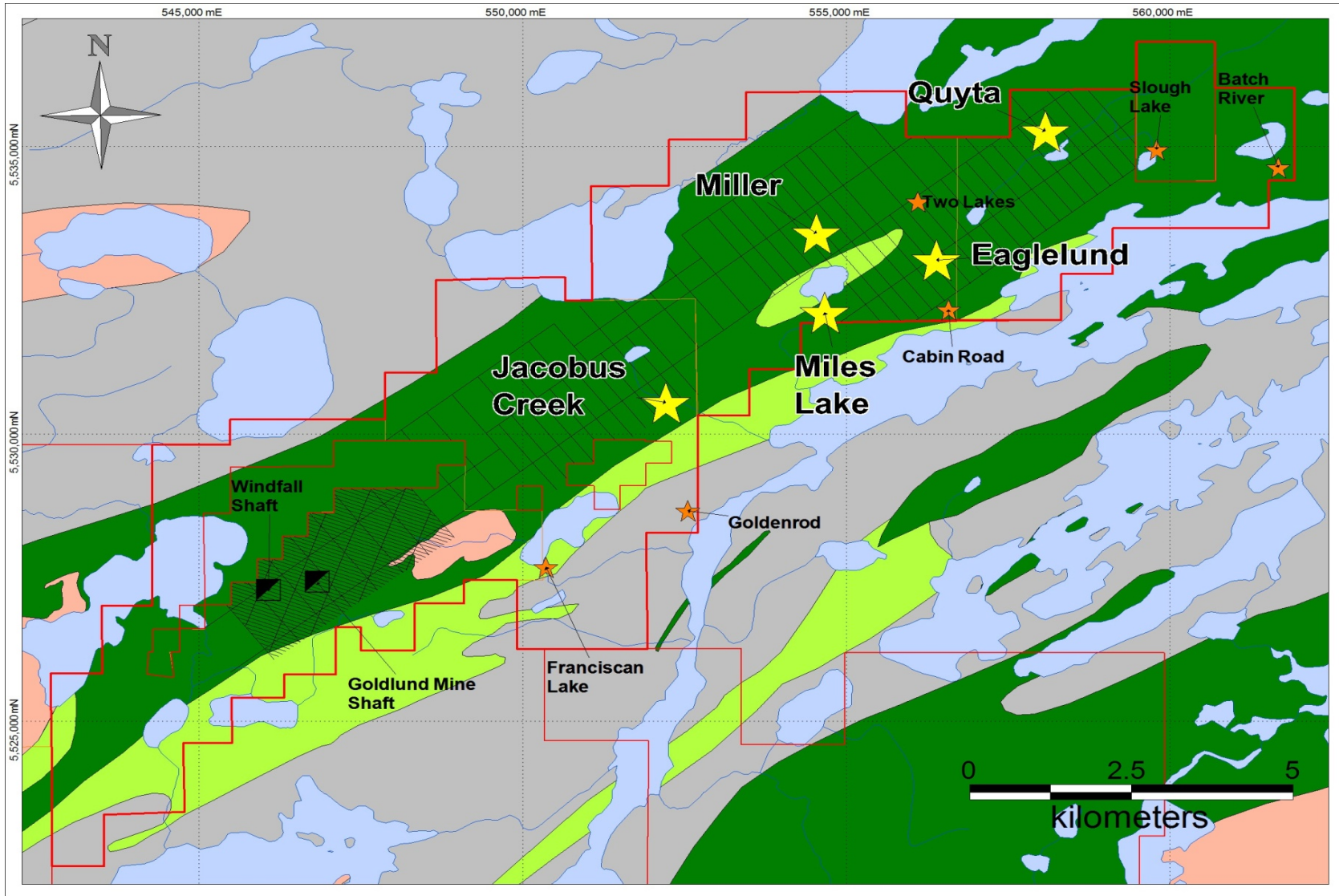


Figure 2 – Gold occurrences on the Goldlund Property



4.1.1 Quyta Showing

The Quyta is one of two showings in the Quyta/Miles/Franciscan area for which historic (non-compliant) resource estimates exist; as such, it was considered to be one of the most significant showings in the mapping area. Two separate historic estimates exist for the showing. An estimate by Neilson & Bray (1981) for the Ontario Geological Survey assigned the Quyta Showing 150,000 tons at 0.1 opt, for a total of 15,000 contained ounces. A more recent estimate by Wardrop in 2011 assigned the deposit 5 to 7 million tonnes at 0.6 to 0.9 g/t, for a best estimate of 170,000 'potential' contained ounces.

4.1.2 Jacobus Creek Showing

The Jacobus Creek Showing is located in the approximate east-west centre of the property (Figure 10). Little historical information is available for the Jacobus Creek Showing, whose MDI is based on a drillhole intercept (DDH T-10, drilled by Tarbush Lode Mining in 1982) of weakly anomalous gold in silicified andesite. Despite this relatively inauspicious result, mapping by Tarbush in the area shows multiple outcrops of altered and/or pyritic granodiorite; an area to the south of the Tarbush drilling was also trenched by Mosher Long Lac Gold Mines. Neither the Mosher Long Lac trenches nor the Tarbush drill collars were located during the investigation.

4.1.3 Eaglelund Showing

Along with the Quyta Showing, the Eaglelund is the second of two showings in the Quyta/Miles/Franciscan grid area for which historic (non-compliant) resources have been calculated. The Eaglelund resource was calculated for the OGS in 1981 by Neilson & Bray, who assigned it a 'speculative' grade and tonnage of 266,000 tonnes at 3.11 g/t gold (0.1 opt), for a total of 26,600 contained ounces.

4.1.4 Miller Showing

The Miller Showing sits approximately 650 m north of Miles Lake on the Miller Block, and approximately 4 km along-strike of the Quyta showing (Figure 10). Historic mapping (e.g. Meagher, 1951) indicates that the Miller Showing comprises 3 separate zones, the Nova, Scotia and Fundy zones; based on their map distribution they appear to represent separate outcrops of the same intrusion. Highlights of historic drilling (as compiled by Mason et al., 1999) include 0.69 g/t Au over 16 m in DDH QM-9, as well as anomalous gold over 52 m with a high grade section of 11.7 g/t Au over 1.2 m in hole N-96-6. High grades at the showing have been confirmed by OGS sampling, including a grab sample assaying 66.2 g/t Au (Mason et al., 1999). Perhaps just as importantly, historic grab sampling of the Miller showing seems to show consistently anomalous grades (for instance, 5 grab samples by the OGS all returned assays above 1.0 g/t Au).

4.1.5 Miles Showing

The Miles Showing consists of an area stripped by Tarbush Lode Mining in 1985 in which two granodiorite sills and one feldspar porphyry sill are exposed over the a length of 300 – 600 metres. According to Langelaar (1985a), the sills are variable in width but generally less than 15 m wide. Mineralization at the Miles showing is variable along strike but seems generally to be best developed in the granodiorite bodies. The strongest mineralization consists of transverse and longitudinal vein sets containing up to 15% fine to coarse pyrite (although usually sulphide content is less than 2%).



Alteration peripheral to the veins is primarily disseminated pyrite, with albite not being observed within trenching (Langelaar, 1985a). Other sections of the sills are unaltered and mostly without veining. 29 grab samples taken by Tarbush from the stripped area in 1985 returned grades from trace to 1.37 g/t Au.

4.1.6 Other Showings

The first of two MDI occurrences that occur in the Miles/Quyta/Franciscan grid area, called the Two Lakes occurrence, consists of a few minor quartz stringers in andesite northeast of the Eaglelund showing (Figure 6). Historic grab samples collected in 1950 returned assays up to 20.1 g/t Au (Williamson, 1950). The second occurrence, Cabin Road, consists of quartz stringers within a narrow band of alteration in an unknown rock type. Historic grab samples collected in 1950 returned an assay of 21.3 g/t Au (Hudson, 1950).

5 Geological Setting and Mineralization

The Project is underlain by Archaean supracrustal and plutonic rocks of the Eastern Wabigoon Sub-Province of the Superior Province. The regional geology presented here is modified from the technical report on the Property by McCracken, 2010.

5.1 Regional Geology

The Project is situated within a northeasterly-projecting arm of the Wabigoon Subprovince extending from Wabigoon Lake to Sioux Lookout. The regional geology of the Project area has been most recently described by L. Chorlton (1991) and the following description is taken from this work (and references therein). The area is described as being comprised of metavolcanic and metasedimentary rocks intruded by several granitoid stocks and many smaller porphyritic and non-porphyritic bodies. The stratigraphic assemblage has been subdivided into five principal rock groups: the Northern Volcanic Belt, Northern Sedimentary Group (Abram Group), Central Volcanic Belt (Neepawa Group), Southern Sedimentary Group (Minnitaki Group) and the Southern Volcanic Belt (see Figure 3). The majority of gold occurrences are located in the Central and Southern Volcanic Belts. The area has been subjected to at least four phases of deformation resulting in a predominantly northeasterly striking structural grain.

Both the Neepawa and Minnitaki Groups show stratigraphic facing to the southeast, although facing reversals are recorded, related to the complex deformation history. Most workers in the area place the Minnitaki Group above the Neepawa Group, though there are still questions about the stratigraphic relationship related to the complex deformational history. Age dates determined from rocks in the two units seem to confirm that the sedimentary units post-date volcanism. Two main alteration events have occurred, the first pre-dating deformation and results from metasomatism as there is no structural fabric or tectonic preference associated with it. It occurs at the metavolcanic-metasedimentary contact. The second alteration event is syngenetic with stages 3 and 4 of deformation and associated gold mineralization includes quartz veining, sulphide mineralization, potassic alteration (sericite) and sodic alteration (albite).

In the area of the Goldlund Deposit, the Neepawa Group can be subdivided into a lower tholeiitic and an upper andesite-basalt division. The lower division consists of tholeiitic mafic and felsic



volcanic rocks with associated sub-volcanic intrusions. The upper division consists of calc-alkaline, tholeiitic mafic to felsic volcanic units that crop out around the Beartrack, Troutfly, and Gardner Lakes.

The metasedimentary rocks of the Minnitaki Group are mainly greywacke and quartzo-feldspathic greywacke, with subordinate argillites and cherts, locally intercalated by slivers of mafic and felsic volcanic rocks. A distinctive banded chert-iron formation marks the base of the group throughout a large part of the area and displays a complex outcrop pattern, which defines the nature of the structural patterns.

The contact between the Southern Volcanic Belt and the Minnitaki Group is tectonic. Facing directions are complex and refolded upright folds are recognized. Most workers consider the Southern Volcanic Group to be older than the Minnitaki Group, though there is no isotopic age data to assist in stratigraphic determination.

5.2 Structure

Colvine (1991) has interpreted a four-stage deformation history in the Sandybeach Lake-Sioux Lookout area, based on the overprinting of individual structures and fabrics. The four stages are described as:

- Stage 1) Foliation – SW-NE trending, subparallel to lithologic contacts,
- Stage 2) Granitic Intrusives – provide competency contrast,
- Stage 3) Auriferous event – sinistral shearing deposits low-grade gold in granitoids, high-grade enrichment along steep northeasterly trending shears,
- Stage 4) NNE-SSW fold hinges and shears overprint Stage 3 deformation.

Stage 1 deformation is expressed by a locally-preserved foliation, subparallel to bedding. The relatively shallow angle between bedding and foliation may be an indication of thrusting. Stage 2 deformation is associated with the emplacement of the granitoid bodies throughout the area. Stage 3 deformation is largely responsible for the northeast-trending structural grain of the belt. Northwest-southeast compression and sinistral rotation generated large-amplitude upright folds with steep, northeasterly-trending axial planes, together with steep northeasterly trending shear zones. Shear zones northwest of the Beartrack-Cross Echo Lakes area and southeast of the Sandybeach Lake area tend to be sinistral-oblique, southeast-side-up, while those in the central portion of the belt tend to be sinistral and subhorizontal. Stage 4 deformation reflects the final phase of convergence in the belt. Large to small-scale folds with steep, north-northeasterly-striking axial planes overprint Stage 3 folds. Irregular belt boundaries and rigid internal stocks restricted lateral extension and resulted in vertical displacements along the intersections of these shears and the Stage 2 shears.

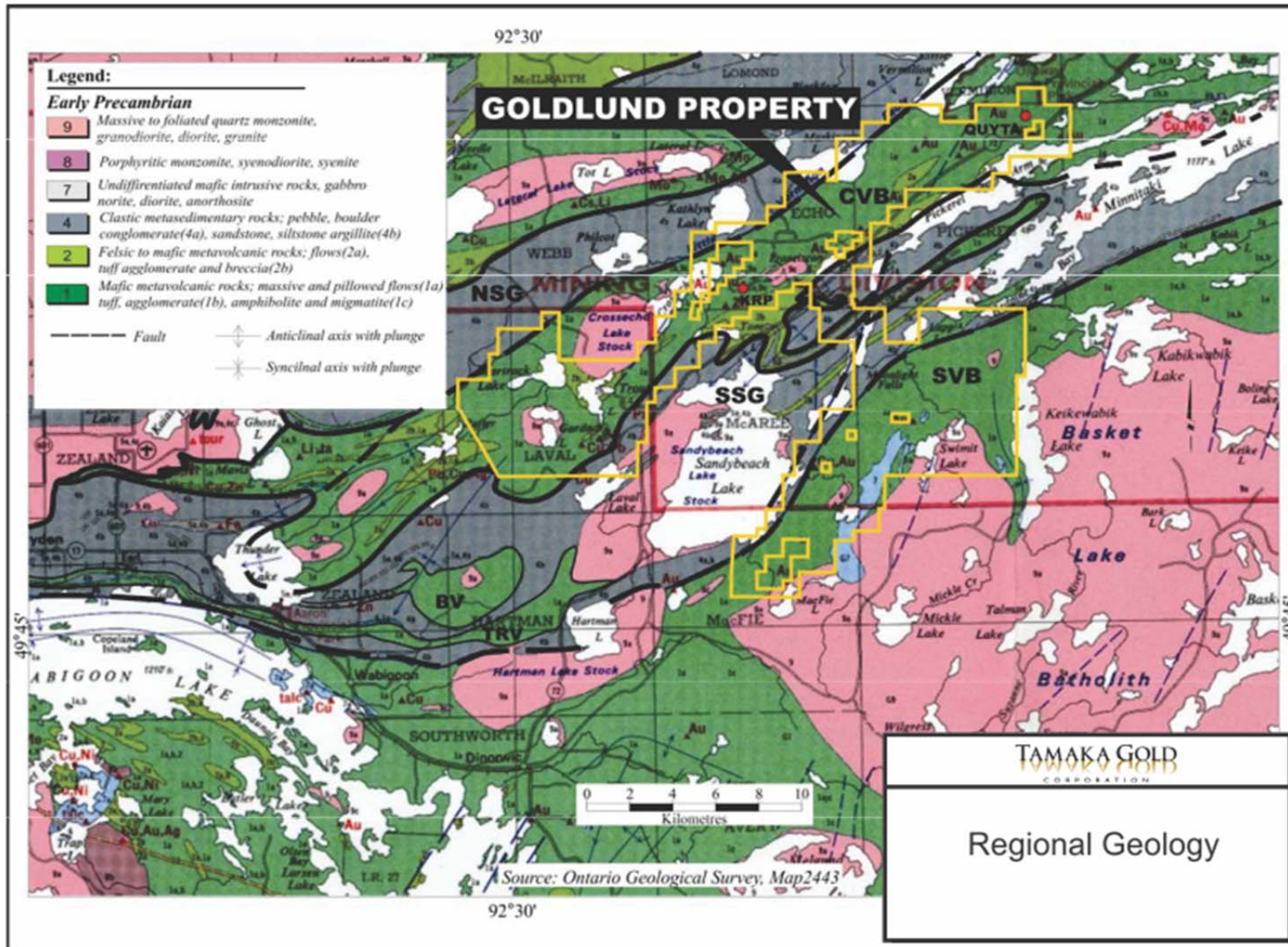


Figure 3 - Regional geology of Goldlund Property area (modified from McCracken, et al. 2010)



5.3 Property Geology

A 3 km wide belt of Precambrian basaltic volcanic rocks strikes northeast across the Project. This basaltic formation is bound by Precambrian sediments to the north and to the south with a wedge of felsic volcanic rocks that occur between the basalt and sediments to the south. The mafic volcanic formation has a 1.5 km wide tuffaceous member to the south and a northern basaltic series of spherulitic flows interlayered with pillow lavas and occasional tuffaceous horizons.

Leucotonalite to diorite sills ("granodiorite" in mine terminology) have intruded near the contact between the tuffs to the south and the spherulitic lavas to the north. These strata-parallel sills dip from vertical to -80° southward and range from 14 to 60 m in thickness. A subsidiary suite of sills intrude narrow tuff beds in spherulitic basalt lavas. These intrusions are known to extend northeastward well beyond the Project and south-westward beyond Cross Echo Lake where they re-appear just south of Troutfly Lake. It has been postulated that this series of intrusives may occur intermittently over a strike-length of 15 km.

The igneous sheets that host the most important zones of mineralization at the Project have been referred to as "grey granodiorite" due to their light colour and significant amounts of biotite and free quartz (Armstrong 1951). Metagabbroic or metadioritic rocks in both transitional and intrusive contact with the "granodiorite", as well as crosscutting feldspar and quartz-feldspar porphyry dikes, were at times themselves referred to as "granodiorite", causing the terminology to become confused. Igneous sheets of granodiorite and/or its gabbroic counterparts to the northeast and southwest of the Goldlund Deposit have been considered primary exploration targets in the past.

The footwall portion of the granodiorite is strongly bleached and altered with quartz carbonate and pyrite mineralization at the former Windfall and Goldlund properties over a width of 15 to 25 m. This is indicated by surface and underground diamond drilling, together with some stoping and open-pit work by Camchib, above the first level of the Project's Zone 1. The gold occurs concentrated in quartz filled cross fractures that trend 010° to 015° and dip northwest at -40° to -75° . These gold bearing fractures occur concentrated in zones that extend intermittently at intervals of 200 to 300 m along the 1.6 km length of the Project that has been explored to a vertical depth of 150 to 200 m at the former Windfall and Goldlund projects.

Two granitic intrusive stocks are wedged into the Basalt formation at Gardner Lake and southwest of Cross Echo Lake. A quartz-porphyry intrusion occurs in the basalt formation immediately northeast of the granodiorite on the Project near Franciscan Lake. Another smaller quartz-porphyry intrusion occurs immediately north of the granodiorite across the Project boundary.

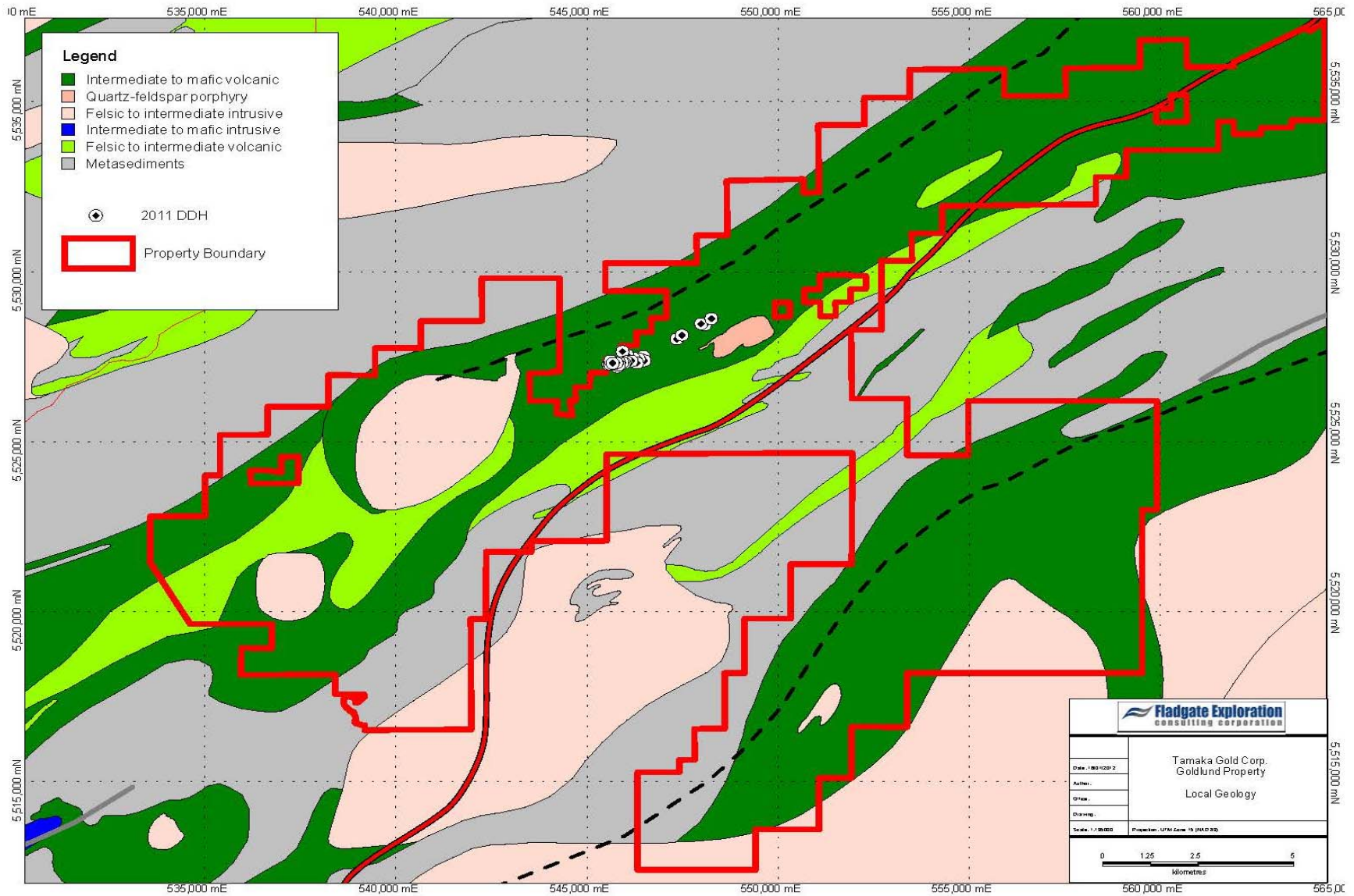


Figure 4 - Geology of the Goldlund Property



5.4 Mineralization

Gold occurs in essentially two different styles in the Project area. The first and most prominent type of mineralization, termed 'Goldlund-style' later in this report, is comprised of transverse, en echelon sets of quartz veining and stockworks occurring within more competent felsic to intermediate intrusive rocks. Mineralization also often occurs in mafic metavolcanics adjacent to the intrusive contacts (Page, 1984). Typically, pyrite, albite and lesser ankerite are associated with these gold-mineralized vein sets (Felix, 1992).

At the Project, the gold is hosted within zones of northeast-trending and gently to moderately northwest-dipping quartz stockworks (comprised of numerous quartz veinlets <1 cm to 20 cm thick). The stockwork zones form bands within the dykes and sills that intrude the east-northeast-trending mafic volcanic country rocks. The intervening areas between the quartz veinlets exhibit strong to moderate feldspathic alteration associated with common fine to medium-grained pyrite and magnetite.

A summary of the characteristics of the Goldlund Au-bearing zone is given by Langelaar (1985):

- 1) "Host Rocks: albite trondhjemite (locally termed the "main dyke" or "Goldlund granodiorite" or the "Goldlund sill").
- 2) Quartz Veining: Tensional veins of quartz and usually containing an associated band of bleached rock in the immediate adjacent trondhjemite. At Goldlund the veins are generally quite straight, strike consistently N-S to N20°E and dip 40° to 60° to the west.
- 3) Alteration: Quartz veins at the Goldlund zone are generally marked by the occurrence of bleached wallrock trondhjemite. According to Froberg (Page 1984) the altered wallrock consists of newly introduced albite, carbonate, magnetite, ilmenite and varying amounts of finely crystallized pyrite. The final alteration product consists of more than 50% albite, with the aforementioned minerals making up the balance.
- 4) Mineralization: Major constituents of the veins proper are quartz, ankeritic carbonate and pyrite. Minerals occurring in minor amounts to trace amounts include, according to Froberg (Page, 1984), actinolite, biotite, tourmaline, scheelite, with metallic constituents including sphalerite, chalcopyrite, galena, altaite, petzite, ilmenite and native gold. Pyrite occurs as coarse cubic crystals and as fine grained disseminations. Based on investigations of the Newlund Mine (Goldlund) deposits Page (1984) suggests that the only definitive indicator of higher grade gold values is the existence of late fracturing of the early vein material."

The Eaglelund, Miles Lake, and Jacobus Creek gold showings on the Property exhibit characteristics of 'Goldlund-style' mineralization.

The second style of mineralization is shear-zone hosted, synkinematic quartz vein systems, typically within but not restricted to mafic metavolcanic rocks. Chlorite, sericite and silica are common alteration types with associated pyrite and minor chalcopyrite, plus various accessory minerals. This style is less prominent on the Property and therefore has not been highly targeted or discussed in the past (Felix, 1992). Of the gold showings investigated in the 2011 mapping program, the Miller and Quya occurrences are classified as shear zone-hosted.



6 Deposit Types

The identified mineralization fits an Archean lode gold model. The Archean lode gold occurrences are common in the Sandybeach Lake-Sioux Lookout area and are concentrated in the Southern and Central Volcanic Belts. Vein systems in both belts are the product of Stage 3 deformation and are related to:

- Northeast-southwest extension, associated with northwest-southeast compression and shortening,
- ductile-brittle deformation near steep northeast-trending shear zones and
- tightening of Stage 3 folds (Chorlton, 1991).

Vein systems in the Southern Belt are typically controlled by the steep, Stage 3 northeasterly-trending shears. Host mafic rocks are chlorite-ankerite schists up to several meters in width. Pyrite, with subordinate chalcopyrite, sphalerite and galena, are the main sulphide minerals in auriferous veins.

In the Central Volcanic Belt, which hosts the Goldlund Deposit, economically significant gold occurrences are hosted in transverse vein arrays within competent rocks, particularly the intermediate to mafic subvolcanic intrusive sheets. Vein systems occupy tensional fractures related to internal deformation of the competent units as folds tightened during Stage 3 deformation. Vein arrays could be expected to develop near fold hinges, within fold limbs and along axial planar foliations. The orientations of individual veins within the arrays are affected by their locations within folds.

The Goldlund Deposit is sub-divided into seven zones of mineralization, typically parallel but offset in one or more directions due to faults that transect the area. Mineralization occurs within transverse vein sets hosted in the felsic to intermediate intrusive bodies, plus in less competent mafic volcanic rocks proximal to their contacts. During the period 1982-1985, Camchib Mines processed approximately 120,000 tonnes of ore to produce 18,000 ounces of gold. This development took place on zone 1 (see Appendix 1 for location). The NI 43-101 compliant mineral estimate completed by Tetra Tech in 2010 reports a Measured and Indicated Resource of ~6.8 million tonnes at an average grade of 1.73 g/t Au. The Inferred Resource contains 18.9 million tonnes at an average grade of 1.02 g/t Au (McCracken, 2010).

7 Current Program

During winter 2012, 31 rock samples were collected from the Goldlund deposit for whole rock geochemistry and petrographic analysis. Samples were chosen within significant intercepts from an array of 2007-2008 drill holes. Representative samples for each of the seven gold-bearing zones on Goldlund's property were collected and analyzed. Preliminary analysis was conducted by John Fingas and the author, including hand sample description and initial petrographic analysis.

In addition, the thin sections were sent to Dr. Eva Schandl of GeoConsult. Analytical techniques employed by Dr. Schandl included petrographic analysis using a transmitted and reflected light microscope and chemical analysis of specific minerals using an ETEC electron microprobe. In



conjunction with the petrographic analysis, Dr. Schandl made use of the results from the whole rock analysis to determine the various rock types.

8 Sampling Method and Approach

Samples were collected by Fladgate staff, and hand sample descriptions were completed by John Fingas for Tamaka. Initial processing of samples for thin section was completed by the author. While all samples were made into thin section, samples containing significant sulfide mineralization were chosen for polished thin sections. Samples were made in to thin sections in the thin section lab at Lakehead Univerisity, Thunder Bay, Ontario.

All samples were sent for whole rock geochemical analysis, and all samples underwent petrographic analysis pertaining to mineralogy, texture (inherent igneous textures as well as metamorphic and deformation related textures), alteration and gold mineralization. Samples were chosen at the discretion of Dr. Schandl for ETEC electron microprobe analysis.

9 Sample Preparation, Analysis and Security

All samples were sent to Activation Laboratories LTD. in Thunder Bay, Ontario for preparation and whole rock geochemical analysis. All samples were analyzed for whole rock geochemistry using Major Elements Fusion ICP (WRA)/Total Digestion ICP (TOTAL), Code 4E-Explor (11+) INAA(INAAGEO). The remaining portions of the samples were sent to Lakehead University in Thunder Bay, Ontario for thin section preparation.

10 Interpretations and Conclusions

Dr. Schandl's observations and interpretations are presented in her complete report, attached in Appendix IV. The main conclusions drawn from the petrography and mineralogy study are displayed below (Schindl, 2012):

1. The suite of 31 samples from the Goldlund Deposit consist of albitized felsic intrusive rocks, andesite and diorite. The felsic intrusives dominate.
2. The rocks are pervasively albitized, partly silicified, biotitized, chloritized, and variably carbonatized.
3. Brecciation, shearing, deformation, granulation and recrystallization of the rocks are characteristic and they post-dated albitization.
4. Gold and accompanying Bi-telluride were identified in an albitite within a recrystallized quartz grain intergrown with albite.
5. Most sulfides in the present suite of rocks post-dated silicification, albitization, carbonate alteration, shearing, deformation and recrystallization.
6. The affinity of gold with increasing Na₂O in the rocks suggests a temporal and/or spatial relationship between albitization and gold mineralization.
7. Additional petrography on mineralized rocks would be useful in investigating the relationship between gold, tellurides, sulfides and gangue minerals.



11 Recommendations

As further investigation of new regions on the property occur, additional samples should be collected for whole rock geochemistry and petrographic analysis to compare variations in deformation, alteration and metamorphic textures throughout the property. In addition, further sampling of high gold grade samples should be analysed to better understand the mechanisms associated with gold mineralization on the property.

The cost of a petrographic study including samples from newly explored regions would be approximately CAD\$4,200.00 (plus assay costs). Assuming this study is of approximately 30 samples with whole rock geochemical analysis and thin section analysis is completed by the same consultant.

To do a detailed study on what mechanisms gold mineralization is related to should also cost approximately CAD\$4,200.00. This study should include 20 to 30 samples with high gold values, increasing the odds that there will be gold mineralization in the small portion used for thin section.



12 References

- | | | |
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Appendix I Work Associated Costs

Work Performed			
Date From	Date To	Description	Cost
Dec 2011	Feb 2012	Professional Fees	\$600.00
March 2012	May 2012	GeoConsult Fees	\$3,630.00
Other			
Date From	Date To	Description	Cost
Dec 2011	Feb 2012	Thin Section Preparation	\$720.00
March 2012	May 2012	Whole Rock Geochemistry	\$1,844.50
Total			\$6,794.50

Claim	#Samples	Total Work Performed (\$)
1166865	6	\$1,315.06
1191761	6	\$1,315.06
1247989	3	\$657.53
KRL18722	5	\$1,095.89
KRL18723	5	\$1,095.89
KRL18724	1	\$219.18
KRL18812	5	\$1,095.89

TOTAL \$6,794.50



Appendix II Statement of Qualifications

I, Maura Joy Kolb, of the CITY of THUNDER BAY, in the PROVINCE of ONTARIO, hereby certify:

I am employed with the geological consulting firm Fladgate Exploration Consulting Corporation.

I am a graduate of Buffalo State College, Buffalo New York, with a Bachelor of Science degree, majoring in Earth Science as of August, 2008.

I am a graduate of Lakehead University, Thunder Bay, Ontario with a Master of Science degree in Geology.

I have been employed as a Project Manager with Fladgate Exploration Consulting Corporation since the completion of my Masters degree in January, 2011.

I am, through Fladgate Exploration Consulting Corporation, currently providing consulting services to Tamaka Gold Corp.

I have no interest, either directly or indirectly, in the subject property.

This report is based on a study of all information made available to me, both published and unpublished, and on information collected in the field by myself and by Fladgate Exploration Consulting Corporation personnel, or provided to me during the period of July to October, 2012.

Dated in Thunder Bay, Ontario, this 25th day of October, 2012.

A handwritten signature in black ink that reads "Maura Kolb". The signature is written in a cursive style with a large loop for the letter 'M'.

Maura J. Kolb



Appendix III Sample Location & Field Descriptions

Attached as separate files.



Appendix IV GeoConsult Petrography/Mineralogy Report

Attached as a separate file.



Appendix V Assay Certificates



Quality Analysis ...



Innovative Technologies

Date Submitted: 20-Dec-11
Invoice No.: A11-15188
Invoice Date: 23-Jan-12
Your Reference: Flaggate

Tamaka Goldcorp
186 Park Ave.
Thunder Bay Ontario P7B1B9
Canada

ATTN: Howard Katz

CERTIFICATE OF ANALYSIS

31 Rock samples were submitted for analysis.

The following analytical package was requested: Code 4E-Expl (11+) INAA(INAA/GEO)/Major Elements Fusion
ICP(WRA)/Total Digestion ICP(TOTAL)

REPORT A11-15188

This report may be reproduced without our consent. If only selected portions of the report are reproduced, permission must be obtained. If no instructions were given at time of sample submittal regarding excess material, it will be discarded within 90 days of this report. Our liability is limited solely to the analytical cost of these analyses. Test results are representative only of material submitted for analysis.

Notes:

Total includes all elements in % oxide to the left of total. Values above the upper limit should be assayed for most accurate values.

CERTIFIED BY:

Emmanuel Eseme, Ph.D.

Quality Control



ACTIVATION LABORATORIES LTD.

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Activation Laboratories Ltd. Report: A11-15188

Analyte Symbol	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Au	Ag	As	Ba	Be	Bi	Br	Cd	Co	Cr	Cs	Cu
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.005	0.01		0.01	5	0.5	2	3	1	2	1	0.5	1	1	0.5	1
Analysis Method	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	INAA	MULT INAA / TD- ICP	INAA	MULT INAA/FUSI CP	FUS-ICP	TD-ICP	INAA	TD-ICP	INAA	INAA	INAA	TD-ICP
I589313	69.59	11.68	6.09	0.06	1.03	5.06	1.99	0.69	0.668	0.14	2.60	99.61	< 5	0.7	< 2	96	2	< 2	< 1	< 0.5	6	< 1	1.8	3
I589314	71.64	11.43	4.23	0.04	0.56	1.84	6.38	0.11	0.441	0.15	3.05	99.87	578	1.2	< 2	22	< 1	< 2	3	< 0.5	4	13	< 0.5	30
I589315	68.52	11.64	7.34	0.06	0.98	2.94	4.45	0.93	0.764	0.17	2.45	100.2	6	1.0	< 2	91	1	2	< 1	< 0.5	5	< 1	< 0.5	4
I589316	62.41	11.91	8.42	0.04	0.80	2.68	6.52	0.09	0.813	0.16	5.66	99.51	19900	15.0	< 2	30	< 1	< 2	3	< 0.5	8	< 1	< 0.5	58
I589317	56.47	11.63	7.65	0.11	1.70	7.15	5.68	0.65	0.735	0.19	6.67	98.63	288	0.7	< 2	249	1	2	3	< 0.5	13	15	3.8	13
I589318	46.49	14.70	19.21	0.22	4.99	3.91	4.11	0.06	2.429	0.25	4.60	101.0	20	< 0.5	< 2	28	< 1	< 2	< 1	< 0.5	41	40	1.3	30
I589319	70.52	11.48	6.11	0.05	1.01	3.97	2.32	1.07	0.710	0.12	2.91	100.3	27	< 0.5	< 2	82	2	< 2	< 1	< 0.5	6	< 1	2.2	4
I589320	67.90	12.54	5.78	0.05	0.79	2.56	6.67	0.31	0.666	0.14	3.54	100.9	1910	1.3	< 2	95	< 1	< 2	< 1	< 0.5	6	< 1	< 0.5	6
I589321	64.84	11.57	6.25	0.05	1.00	3.27	6.43	0.27	0.605	0.13	4.95	99.37	3650	1.9	< 2	184	1	< 2	< 1	< 0.5	11	< 1	1.8	30
I589322	66.67	11.30	6.90	0.08	1.08	3.56	3.10	1.93	0.780	0.16	3.67	99.23	< 5	0.6	< 2	99	2	< 2	< 1	< 0.5	6	< 1	2.1	6
I589323	52.06	12.44	13.32	0.18	5.16	5.15	2.93	0.18	1.592	0.23	6.79	100.0	< 5	< 0.5	< 2	51	< 1	< 2	< 1	< 0.5	32	40	2.6	71
I589324	64.30	14.56	3.58	0.07	1.24	3.05	7.99	0.31	0.300	0.22	4.30	99.91	8400	5.4	< 2	401	2	< 2	3	< 0.5	9	27	2.0	30
I589325	71.61	6.74	7.70	0.11	1.10	4.49	3.00	0.39	0.904	0.10	4.13	100.3	14400	5.7	< 2	224	< 1	< 2	1	< 0.5	20	31	3.0	51
I589326	48.51	14.88	11.74	0.20	2.46	10.16	4.46	0.30	1.712	0.26	5.52	100.2	9	< 0.5	< 2	111	< 1	< 2	2	< 0.5	58	392	3.2	87
I589327	64.96	16.23	2.27	0.04	1.02	3.51	6.99	1.21	0.248	0.10	3.89	100.5	5340	0.9	< 2	483	1	< 2	< 1	< 0.5	6	22	1.1	8
I589328	55.16	14.44	5.98	0.08	1.40	5.49	7.93	0.16	0.714	0.20	6.56	98.12	1850	0.7	< 2	50	1	< 2	< 1	< 0.5	8	11	< 0.5	19
I589329	62.40	12.17	8.62	0.08	1.67	4.84	3.58	0.30	1.006	0.19	4.52	99.38	12	< 0.5	< 2	48	2	< 2	< 1	< 0.5	11	19	< 0.5	4
I589330	60.65	11.25	9.11	0.09	1.60	4.15	5.21	0.15	0.901	0.17	6.58	99.85	1570	1.1	< 2	24	< 1	2	< 1	< 0.5	14	8	1.4	9
I589331	64.50	11.32	8.60	0.10	1.64	3.41	5.24	0.13	0.915	0.20	4.37	100.4	32	0.6	< 2	40	< 1	< 2	< 1	< 0.5	11	18	< 0.5	8
I589332	60.77	12.94	10.26	0.09	1.04	4.59	3.62	1.41	1.176	0.20	3.40	99.50	15	< 0.5	< 2	235	1	< 2	< 1	< 0.5	14	20	1.5	14
I589333	67.95	15.65	4.71	0.10	1.54	3.67	2.09	2.20	0.524	0.13	1.54	100.1	< 5	< 0.5	< 2	306	2	< 2	< 1	< 0.5	10	9	2.6	4
I589334	60.85	10.13	9.55	0.08	0.77	6.37	5.26	0.26	0.530	0.11	6.40	100.3	> 30000	3.2	< 2	67	1	< 2	< 1	< 0.5	9	< 1	2.6	23
I589335	59.62	14.89	5.50	0.07	0.53	4.76	8.34	0.15	0.750	0.15	5.17	99.91	1070	1.5	< 2	26	1	< 2	< 1	< 0.5	11	< 1	1.3	5
I589336	68.53	11.72	6.94	0.08	1.05	3.45	3.50	0.71	0.790	0.17	2.91	99.85	41	0.8	< 2	194	2	2	< 1	< 0.5	6	< 1	< 0.5	1
I589337	59.39	15.47	6.89	0.09	1.61	5.91	3.43	2.08	0.965	0.20	3.05	99.08	10	< 0.5	< 2	429	2	< 2	< 1	< 0.5	20	2	2.8	6
I589338	54.44	11.67	9.83	0.24	1.88	9.24	3.10	0.51	1.738	0.18	7.62	100.4	11	< 0.5	< 2	104	< 1	< 2	< 1	< 0.5	31	38	1.1	69
I589339	68.54	11.21	6.93	0.07	0.87	4.34	2.93	1.39	0.782	0.17	2.60	99.82	8	0.5	< 2	623	2	< 2	< 1	< 0.5	11	< 1	2.1	20
I589340	54.39	11.94	6.32	0.12	0.75	9.07	6.65	0.24	0.888	0.17	7.25	97.79	1170	2.4	< 2	54	1	< 2	< 1	< 0.5	7	< 1	< 0.5	30
I589341	56.76	14.77	6.94	0.07	0.77	5.23	8.38	0.18	0.749	0.20	5.34	99.38	3370	2.7	< 2	20	< 1	< 2	9	< 0.5	5	< 1	< 0.5	4
I589342	68.51	11.10	5.95	0.05	1.10	2.74	5.57	0.15	0.643	0.12	2.90	98.83	20	0.8	< 2	26	2	< 2	< 1	< 0.5	5	< 1	< 0.5	9
I589343	67.40	15.97	2.08	0.02	0.96	3.00	7.65	0.79	0.256	0.10	2.74	101.0	20	< 0.5	< 2	543	2	< 2	3	< 0.5	4	24	2.2	5



Activation Laboratories Ltd. Report: A11-15188

Analyte Symbol	Hf	Hg	Ir	Mo	Ni	Pb	Rb	S	Sb	Sc	Se	Sr	Ta	Th	U	V	W	Y	Zn	Zr	La	Ce	Nd	Sm
Unit Symbol	ppm	ppm	ppb	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.5	1	5	2	1	5	20	0.001	0.2	0.1	3	2	1	0.5	0.5	5	3	1	1	2	0.2	3	5	0.1
Analysis Method	INAA	INAA	INAA	TD-ICP	TD-ICP	TD-ICP	INAA	TD-ICP	INAA	INAA	INAA	FUS-ICP	INAA	INAA	INAA	FUS-ICP	INAA	FUS-ICP	TD-ICP	FUS-ICP	INAA	INAA	INAA	INAA
IS89313	13.5	<1	<5	3	4	<5	30	0.219	0.2	9.2	<3	251	<1	4.6	1.3	28	<3	119	53	566	25.8	74	49	15.0
IS89314	11.8	<1	<5	<2	2	<5	<20	2.20	<0.2	5.2	<3	184	<1	4.3	<0.5	41	6	107	22	431	51.9	132	71	22.8
IS89315	11.0	<1	<5	7	3	<5	30	0.514	0.3	10.3	<3	155	2	3.8	0.6	35	<3	114	45	507	26.9	70	35	13.4
IS89316	14.4	<1	<5	<2	7	13	<20	5.33	0.7	4.7	<3	347	<1	3.6	<0.5	130	22	56	30	497	29.4	74	31	10.9
IS89317	9.1	<1	<5	<2	10	<5	<20	1.19	0.4	13.6	<3	384	<1	4.2	1.5	71	6	63	57	308	22.5	55	25	8.2
IS89318	4.9	<1	<5	<2	30	<5	<20	0.067	<0.2	43.7	<3	115	<1	1.3	<0.5	470	<3	42	120	158	11.4	32	16	6.0
IS89319	13.0	<1	<5	<2	3	<5	30	0.010	0.6	9.6	<3	251	2	4.8	<0.5	35	<3	121	28	555	29.1	79	50	14.9
IS89320	18.2	<1	<5	2	10	<5	<20	1.10	0.3	8.9	<3	169	3	4.1	<0.5	36	10	117	28	600	31.6	77	31	14.0
IS89321	15.0	<1	<5	3	4	<5	<20	2.14	0.3	12.3	<3	164	3	3.2	<0.5	33	<3	98	31	495	26.6	69	35	12.2
IS89322	11.2	<1	<5	<2	2	<5	30	0.008	0.3	11.5	<3	93	2	3.9	0.7	33	<3	101	48	495	28.1	72	38	13.5
IS89323	3.5	<1	<5	<2	36	5	<20	0.344	0.2	29.0	<3	97	<1	1.8	0.8	274	<3	35	108	151	13.4	31	14	5.4
IS89324	4.3	<1	<5	14	12	13	<20	1.33	<0.2	4.0	<3	439	<1	12.6	2.9	43	8	12	66	186	56.7	95	37	7.4
IS89325	1.7	<1	<5	3	26	101	<20	1.06	<0.2	16.0	<3	211	<1	1.5	<0.5	141	<3	16	63	61	6.8	13	<5	2.5
IS89326	3.1	<1	<5	<2	246	<5	30	0.339	<0.2	30.6	<3	201	1	0.7	<0.5	241	<3	22	102	112	14.6	40	18	5.7
IS89327	3.2	<1	<5	<2	14	8	<20	0.398	0.3	3.4	<3	350	<1	2.2	<0.5	27	4	4	36	105	13.6	26	13	2.5
IS89328	8.8	<1	<5	<2	6	6	<20	2.87	0.4	8.1	<3	358	<1	5.9	2.0	35	27	54	34	292	32.8	67	22	8.6
IS89329	11.7	<1	<5	<2	7	<5	<20	0.016	0.7	16.6	<3	148	<1	2.9	0.6	56	<3	83	42	386	21.3	64	40	11.8
IS89330	11.6	<1	<5	<2	6	<5	<20	1.24	0.6	14.7	<3	121	<1	2.6	<0.5	45	<3	73	32	377	23.8	60	36	9.7
IS89331	12.2	<1	<5	<2	5	7	<20	0.153	0.3	14.4	<3	149	3	2.9	<0.5	46	4	77	70	399	22.3	57	29	10.5
IS89332	8.2	<1	<5	<2	10	<5	<20	0.010	0.3	19.5	<3	171	2	3.0	0.6	89	<3	72	40	353	18.1	48	26	9.6
IS89333	3.9	<1	<5	<2	13	<5	40	0.022	0.3	8.7	<3	166	<1	4.8	1.0	59	<3	12	102	160	28.4	51	18	3.8
IS89334	14.4	<1	<5	<2	5	<5	<20	3.04	<0.2	8.8	<3	247	<1	3.4	<0.5	34	<3	104	32	474	54.5	111	42	13.7
IS89335	15.9	<1	<5	<2	1	<5	<20	1.50	0.2	9.0	<3	267	2	4.0	1.8	18	12	145	18	552	30.4	82	42	15.8
IS89336	11.6	<1	<5	<2	2	<5	<20	0.016	0.3	11.6	<3	102	<1	3.8	0.9	29	3	108	41	532	29.2	72	41	14.1
IS89337	2.5	<1	<5	<2	18	6	40	0.022	0.3	14.8	<3	133	<1	3.1	<0.5	97	17	14	68	147	20.3	40	16	4.3
IS89338	3.1	<1	<5	<2	28	<5	<20	0.049	<0.2	33.4	<3	155	2	0.9	<0.5	304	3	33	78	125	10.4	26	14	5.0
IS89339	11.8	<1	<5	3	2	<5	40	0.547	<0.2	12.5	<3	63	2	4.2	<0.5	34	<3	112	142	482	33.9	82	45	15.7
IS89340	16.1	<1	<5	5	3	<5	<20	2.16	<0.2	13.5	<3	260	<1	3.8	1.7	37	9	156	17	565	36.9	91	45	16.8
IS89341	13.6	<1	<5	3	2	<5	<20	2.29	<0.2	10.4	<3	246	3	4.5	<0.5	64	21	115	12	459	36.2	98	51	16.8
IS89342	12.0	<1	<5	<2	2	<5	<20	0.137	<0.2	8.4	<3	99	<1	3.9	<0.5	26	<3	124	47	535	28.6	76	38	15.0
IS89343	3.0	<1	<5	3	12	<5	20	0.020	<0.2	2.7	<3	501	<1	3.5	<0.5	29	<3	8	40	116	14.5	27	13	3.2



Activation Laboratories Ltd. Report: A11-15188

Analyte Symbol	Eu	Tb	Yb	Lu	Mass
Unit Symbol	ppm	ppm	ppm	ppm	g
Detection Limit	0.1	0.5	0.1	0.05	
Analysis Method	INAA	INAA	INAA	INAA	INAA
IS89313	3.4	3.0	15.8	2.14	1.924
IS89314	4.1	2.5	12.5	1.90	1.871
IS89315	3.0	2.3	12.8	1.87	1.911
IS89316	2.2	1.2	7.2	1.18	2.030
IS89317	2.0	1.4	8.5	1.32	2.015
IS89318	2.0	1.0	5.7	0.90	2.083
IS89319	3.2	2.9	15.5	2.33	1.876
IS89320	3.4	3.4	16.5	2.65	2.082
IS89321	2.9	2.7	14.1	2.24	2.141
IS89322	3.1	2.5	13.1	1.83	2.001
IS89323	1.7	0.9	4.2	0.65	2.198
IS89324	1.8	< 0.5	1.0	0.10	1.900
IS89325	0.8	< 0.5	2.1	0.29	2.007
IS89326	1.6	< 0.5	2.6	0.42	2.091
IS89327	0.8	< 0.5	< 0.1	< 0.05	1.779
IS89328	2.2	1.3	6.0	0.93	2.128
IS89329	2.7	2.0	11.7	1.80	1.961
IS89330	2.7	1.8	10.2	1.53	2.070
IS89331	2.6	1.9	10.7	1.60	1.927
IS89332	2.3	1.7	9.6	1.44	1.858
IS89333	1.2	< 0.5	1.4	0.23	2.031
IS89334	3.2	2.6	13.3	1.93	2.046
IS89335	3.5	3.3	17.4	2.61	2.101
IS89336	3.1	2.5	14.1	2.06	2.218
IS89337	1.4	0.5	1.8	0.27	1.974
IS89338	1.7	1.0	4.7	0.70	1.906
IS89339	3.5	2.9	14.8	2.20	1.795
IS89340	3.9	3.7	19.6	3.03	1.862
IS89341	3.5	3.2	14.9	2.29	1.647
IS89342	3.1	2.8	14.5	2.17	1.991
IS89343	0.9	< 0.5	0.7	0.11	1.803



Activation Laboratories Ltd. Report: A11-15188

Quality Control																										
Analyte Symbol	SiO2	Al2O3	Fe2O3(T)	MnO	MgO	CaO	Na2O	K2O	TiO2	P2O5	LOI	Total	Au	Ag	Ag	As	Ba	Ba	Be	Bi	Br	Cd	Co	Cr		
Unit Symbol	%	%	%	%	%	%	%	%	%	%	%	%	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm		
Detection Limit	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.005	0.01		0.01	5	0.5	5	2	2	50	1	2	1	0.5	1	1		
Analysis Method	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	FUS-ICP	INAA	TD-ICP	INAA	INAA	FUS-ICP	INAA	FUS-ICP	TD-ICP	INAA	TD-ICP	INAA	INAA		
GXR-1 Meas														31.9						1410			3.6			
GXR-1 Cert														31.0						1380			3.30			
NIST 694 Meas	11.62	1.88	0.73	0.01	0.34	42.76	0.86	0.54	0.115	30.23																
NIST 694 Cert	11.2	1.80	0.790	0.0116	0.330	43.6	0.860	0.510	0.110	30.2																
DNC-1 Meas	47.00	18.63	9.75	0.15	10.02	11.49	1.93	0.23	0.481	0.08							105									
DNC-1 Cert	47.15	18.34	9.97	0.150	10.13	11.49	1.890	0.234	0.480	0.070							118									
GBW 07113 Meas	71.23	12.87	3.25	0.15	0.14	0.59	2.49	5.43	0.281	0.04							504		4							
GBW 07113 Cert	72.8	13.0	3.21	0.140	0.160	0.590	2.57	5.43	0.300	0.0500							506		4.00							
SDC-1 Meas														< 0.5							< 2		< 0.5			
SDC-1 Cert														0.0410						2.60		0.0800				
SCO-1 Meas														< 0.5							< 2		< 0.5			
SCO-1 Cert														0.134						0.37		0.140				
GXR-6 Meas														< 0.5							< 2		< 0.5			
GXR-6 Cert														1.30						0.290		1.00				
W-2a Meas	52.88	15.39	10.79	0.17	6.29	11.12	2.22	0.62	1.078	0.13							173				< 1					
W-2a Cert	52.4	15.4	10.7	0.163	6.37	10.9	2.14	0.626	1.06	0.130							182				1.30					
SY-4 Meas	49.63	20.18	6.19	0.11	0.50	8.11	6.91	1.65	0.283	0.13							345				3					
SY-4 Cert	49.9	20.69	6.21	0.108	0.54	8.05	7.10	1.66	0.287	0.131							340				2.6					
BIR-1a Meas	47.49	15.58	11.14	0.17	9.63	13.48	1.81	0.02	0.949	0.03							6				< 1					
BIR-1a Cert	47.96	15.50	11.30	0.175	9.700	13.30	1.82	0.030	0.96	0.021							6				0.58					
DNC-1a Meas																										
DNC-1a Cert																										
DMMAS 114 Meas													2190			1740		1470					41	98		
DMMAS 114 Cert													2199			1624		1561					42	84		
IS89325 Orig														5.7							2		< 0.5			
IS89325 Dup														5.6							< 2		< 0.5			
IS89327 Orig	64.64	16.17	2.29	0.04	1.02	3.52	6.95	1.21	0.245	0.08	3.89	100.0					481			1						
IS89327 Dup	65.28	16.29	2.26	0.04	1.02	3.50	7.03	1.21	0.250	0.11	3.89	100.9					484			1						
IS89339 Orig														< 0.5							< 2		< 0.5			
IS89339 Dup														0.8							< 2		< 0.5			
IS89342 Orig	68.51	11.10	5.95	0.05	1.10	2.74	5.57	0.15	0.643	0.12	2.90	98.83	20	0.8	< 5	< 2	26	< 50	2	< 2	< 1	< 0.5	5	< 1		
IS89342 Split	68.84	11.15	5.93	0.05	1.10	2.76	5.60	0.15	0.644	0.13	2.95	99.29	19	< 0.5	< 5	< 2	26	< 50	2	< 2	2	< 0.5	6	< 1		
IS89342 Split	68.84	11.15	5.93	0.05	1.10	2.76	5.60	0.15	0.644	0.13	2.95	99.29					26		2							
Method Blank														< 0.5							< 2		< 0.5			
Method Blank														< 0.5							< 2		< 0.5			
Method Blank														< 0.5							< 2		< 0.5			



Activation Laboratories Ltd. Report: A11-15188

Quality Control																								
Analyte Symbol	Cs	Cu	Hf	Hg	Ir	Mo	Ni	Pb	Rb	S	Sb	Sc	Se	Sr	Ta	Th	U	V	W	Y	Zn	Zr	La	Ce
Unit Symbol	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	0.5	1	0.5	1	5	2	1	5	20	0.001	0.2	0.1	3	2	1	0.5	0.5	5	3	1	1	2	0.2	3
Analysis Method	INAA	TD-ICP	INAA	INAA	INAA	TD-ICP	TD-ICP	TD-ICP	INAA	TD-ICP	INAA	INAA	INAA	FUS-ICP	INAA	INAA	INAA	FUS-ICP	INAA	FUS-ICP	TD-ICP	FUS-ICP	INAA	INAA
GXR-1 Meas		1100				17	44	770		0.229														
GXR-1 Cert		1110				16.0	41.0	730		0.257														
NIST 694 Meas																	1670							
NIST 694 Cert																	1740							
DNC-1 Meas														145			155			14			33	
DNC-1 Cert														144.0			149.0			16.0			38	
GBW 07113 Meas														41			7			43			386	
GBW 07113 Cert														43.0			5.00			43.0			403	
SDC-1 Meas		28				< 2	38	35		0.055													104	
SDC-1 Cert		30.00				0.250	38.0	25.00		0.0650													103.00	
SCO-1 Meas		30				< 2	28	28		0.066													103	
SCO-1 Cert		29				1.4	27	31.0		0.0630													100	
GXR-6 Meas		67				4	31	100		0.014													140	
GXR-6 Cert		66.0				2.40	27.0	101		0.0160													118	
W-2a Meas														198			278			19			88	
W-2a Cert														190			262			24.0			94.0	
SY-4 Meas														1193			6			110			540	
SY-4 Cert														1191			8.0			119			517	
BIR-1a Meas														108			338			14			16	
BIR-1a Cert														110			310			16			18	
DNC-1a Meas		93					259																58	
DNC-1a Cert		100.0					247																70.0	
DMMAS 114 Meas											12.4	7.2					19.1						17.6	29
DMMAS 114 Cert											11.2	6.5					17.4						15.1	23.7
IS59325 Orig		53				3	26	104		1.07													67	
IS59325 Dup		50				3	25	98		1.05													60	
IS59327 Orig														345				27		4			106	
IS59327 Dup														355				28		4			104	
IS59339 Orig		20				3	2	< 5		0.539													142	
IS59339 Dup		20				3	2	< 5		0.555													141	
IS59342 Orig	< 0.5	9	12.0	< 1	< 5	< 2	2	< 5	< 20	0.137	< 0.2	8.4	< 3	99	< 1	3.9	< 0.5	28	< 3	124	47	535	28.6	76
IS59342 Split	< 0.5	9	12.5	< 1	< 5	3	1	< 5	< 20	0.126	< 0.2	8.8	< 3	100	< 1	4.3	0.8	27	< 3	124	46	540	30.3	78
IS59342 Split														100				27		124			540	
Method Blank		3				< 2	< 1	< 5		< 0.001													< 1	
Method Blank		< 1				< 2	< 1	< 5		< 0.001													< 1	
Method Blank		3				< 2	< 1	< 5		< 0.001													< 1	



Activation Laboratories Ltd.

Report: A11-15188

Quality Control							
Analyte Symbol	Nd	Sm	Eu	Tb	Yb	Lu	Mass
Unit Symbol	ppm	ppm	ppm	ppm	ppm	ppm	g
Detection Limit	5	0.1	0.1	0.5	0.1	0.05	
Analysis Method	INAA	INAA	INAA	INAA	INAA	INAA	INAA

GXR-1 Meas							
GXR-1 Cert							
NIST 694 Meas							
NIST 694 Cert							
DNC-1 Meas							
DNC-1 Cert							
GBW 07113 Meas							
GBW 07113 Cert							
SDC-1 Meas							
SDC-1 Cert							
SCO-1 Meas							
SCO-1 Cert							
GXR-6 Meas							
GXR-6 Cert							
W-2a Meas							
W-2a Cert							
SY-4 Meas							
SY-4 Cert							
BIR-1a Meas							
BIR-1a Cert							
DNC-1a Meas							
DNC-1a Cert							
DMMAS 114 Meas		2.7					
DMMAS 114 Cert		2.4					
I589325 Orig							
I589325 Dup							
I589327 Orig							
I589327 Dup							
I589339 Orig							
I589339 Dup							
I589342 Orig	38	15.0	3.1	2.8	14.5	2.17	1.991
I589342 Split	40	15.6	3.1	2.7	15.2	2.28	1.806
I589342 Split							
Method Blank							
Method Blank							
Method Blank							

