

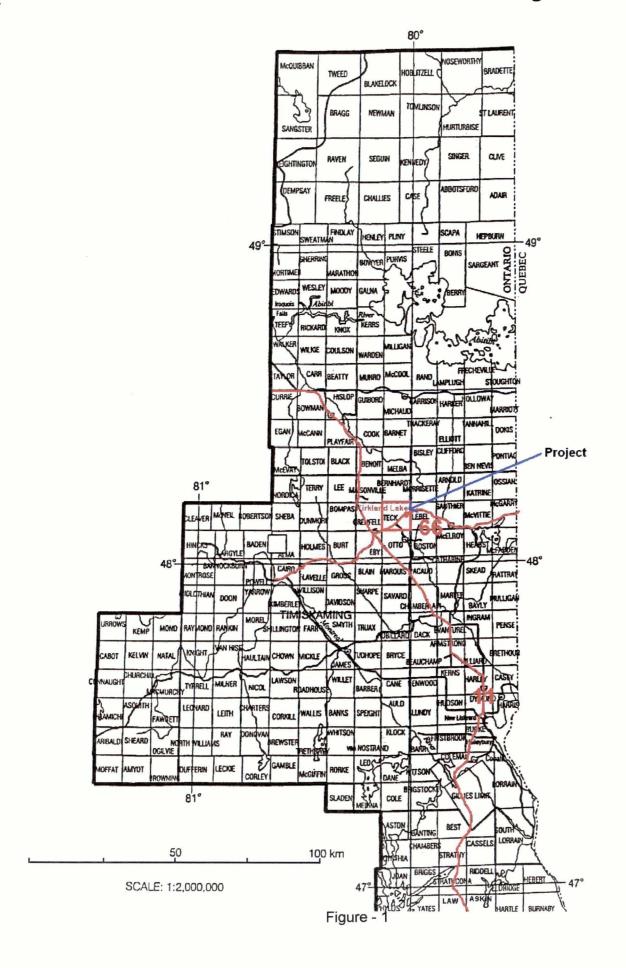
**BGM** Property L71901 Teck Township District of Temiskaming NTS 42/A 1 Hole BGM - 3 March 2015

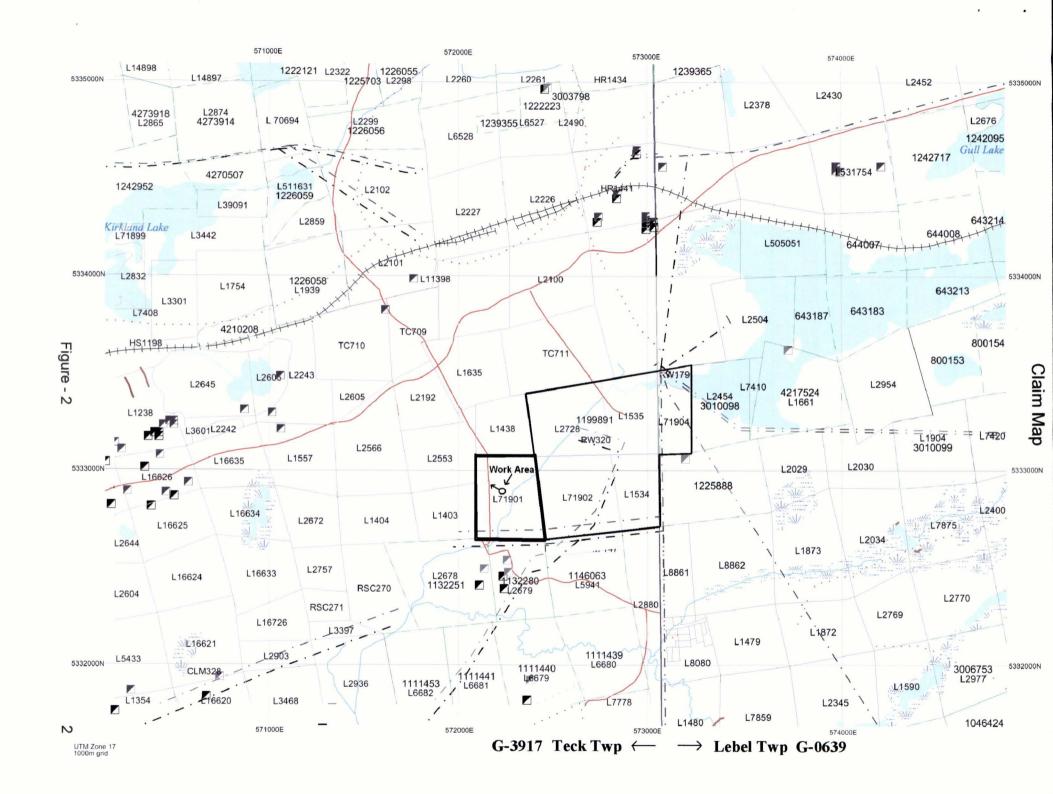
Prepared by : E. Marion

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# Kirkland Lake Resident Geologist's District





#### PROPERTY LOCATION

This property is located in Teck Township, Larder Lake mining division. The claims are located on the Teck Twp. - Lebel Twp. boundary. with L71901 at the south west of the group. This is in the Kirkland Lake Resident Geologist district and can be found on NTS 42 A\1 with the geographic center of the claim being at approximately 80°01"43'W and 48°08" 41'N.

All mining services and supplies are readily available in the area. Hydro lines and roads cross the property. Skilled workers are numerous in the region as the area is experiencing heightened mining and exploration activity.

#### **ACCESS**

Turning south off of Highway 66 (Government Road) at Duncan Avenue and heading south on this street for 425 meters, the street will cross over the north boundary of the mining claim at a point about 800 feet west of the #1 claim post. The various streets give good access. Several outcroppings are accessible from the street.

#### CLAIMS

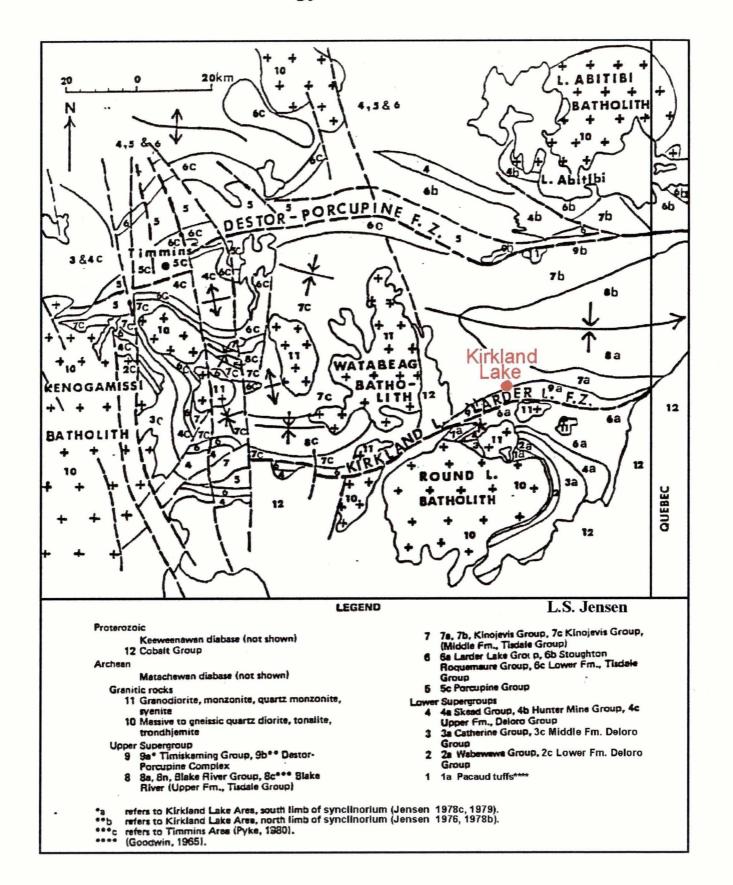
This project consists of a leased mining claim totalling one claim unit, covering approximately 15.3 hectares recorded as L71901, on Plan G-3917 of Teck Township, Temiskaming District. The claim covers one of the claims of the former Black Gold Mines property.

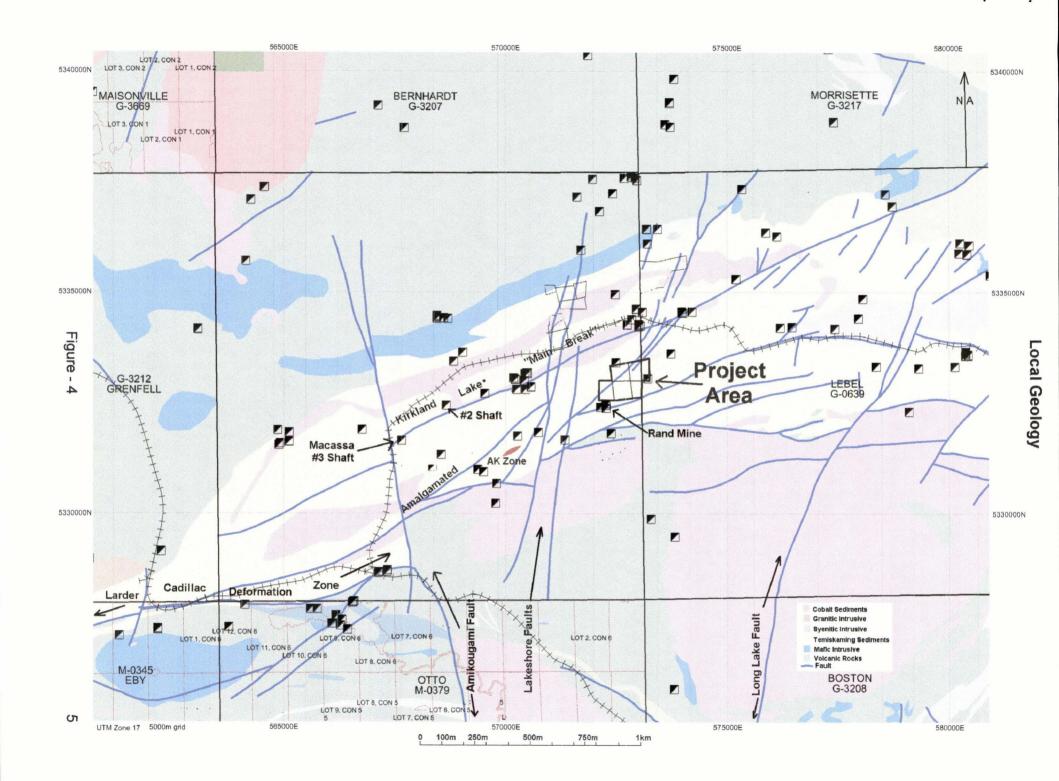
#### **GENERAL GEOLOGY**

The Black property is in the Abitibi Greenstone Belt of the Superior Province, in a region dominated by variably deformed. Archaen mafic to intermediate, pillowed to massive and agglomeratic volcanics with minor clastic interflow and fluvial sediments with attendant mafic to felsic intrusives. The oldest rocks exposed in the Kirkland Lake area are the Keewatin series, a group of volcanic rocks that is widespread and practically devoid of sedimentary members. Long and relatively narrow bands of diorite and gabbro are associated with the lava flows. Some of these are probably intrusive sills; other narrow bands may be only the coarse grained portions of thick flows. Unconformably overlying the Keewatin lavas is the Kirkland Lake belt of predominantly sedimentary rocks commonly known as the Timiskaming sediments occuring in a long and relatively narrow belt. To the north of the Temiskaming sediments, the Blake River intermediate volcanic rocks form a large east plunging synclinorium which host the Noranda area VMS deposits located about 60 kilometers to the east. The rocks of both the Keewatin and Timiskaming series were intruded by Algoman rocks, which occur as stocks, dikes, and irregular-shaped bodies ranging in composition from granite to diorite or lamprophyre. In Teck township the most important of the intrusives are the syenite, augite syenite, and syenite porphyry, the longer axes of which roughly parallel the strike of the sediments. The svenite is in the form of an irregular pipelike body 1,600 by 900 feet at surface and plunges westward at 43° through the Kirkland Lake mines. Both the augite syenite and syenite porphyry stocks are characterized by a steep dip on the north side with a flatter dip at the south contact, so that the widths of these stocks increase with depth. Each has a general westerly plunge.

The Larder - Cadillac Deformation Zone (LCDZ) is a major east-west structural control on gold bearing alteration and mineralization passes about 1400 meters south of the Black property. Much of its length coincides with the folded and deformed sinuous belt of sedimentary rocks of Temiskaming age. The LCDZ is a faulted zone in the area with a known length of more than 200 kilometers miles across northwestern Quebec and the Kirkland Lakes areas on west to Matachewan. It is a strong wide carbonatized shear zone, characterized by the presence of green mica and quartz stockworks. This "break" may be regarded as the most important structural feature, for it or its branches appear to have had some influence on the localization of most of the ore bodies. It has been traced at intervals on surface to the east across Gauthier, McVittie and McGarry townships. The Larder Lake "break" is exposed in Teck township about a mile to the south of the Kirkland Lake fault on which the producing mines are located. From the southern part

# General Geology of the Kirkland Lake Area





of Teck township it has been traced west-south-westward to where it is overlain by the later Cobalt series in Eby township. The amount of displacement along the Larder Lake "break" is not known. The length of the fault zone, combined with the alteration along it and the deformation of adjoining formations, suggests a very great total displacement. Evidence shows that the south side moved upward and eastward with respect to the north side.

No genetic relationship has been established between the gold deposits of the Kirkland Lake -Larder Lake area and any particular type of intrusive. Gold occurs in a variety of rock types at different properties, and even within the limits of one mine's workings. Ore bodies are found in: (1) carbonate rock (dolomite), (2) basaltic lava, (3) dacitic lava, (4) syenite dikes and stocks, (5) tuffs and clastic sediments, and (6) talc-chlorite schist with interfingering dikes. It will thus be apparent that structural deformation with accompanying rock alteration is of prime importance in the search for new ore bodies and that the rock types present are of secondary importance.

Widespread exploration has shown that ore bodies in the Kirkland Lake-Larder Lake gold belt have a closer relationship to structures than to rock types. The Kerr Addison mine, is located 36 km to the east has produced in excess of ten million ounces of gold. This ore deposit is hosted by altered and strongly sheared mafic to ultramafic volcanics and interflow graphitic sediments of the Larder Lake Group and it is associated with altered plugs and dykes, known locally as "albitite" of unknown original composition. It contains two distinct ore types: "green carbonate ore", as quartz veins in altered ultramafic volcanics rocks and "flow ore" as pyritic, altered deformed variolitic and pillowed basalts with only minor quartz veining. Both ore types are spatially associated with the Kerr Fault, a strong persistant splay off the LCDZ.

The main ore zone or "Main Break" of Kirkland Lake is an outstanding example of the close association between ore and a fault system. The Kirkland Lake Main Break is also a splay of the LCDZ. Ore is found in all rock types of the camp with the exception of a few late diabase dikes. Any promising pre-ore structure regardless of the nature of the country rock should be further evaluated.

The new "South Mine" complex, consisting of multiple mineralized zones of ore-grade mineralization has been discovered in an area extending 600 feet to 2,200 feet south of the Kirkland Lake Camp workings. These are both north-south, and east-west structures. Current drilling is successfully expanding the ore eastward and southward. The understanding is that these heavily mineralized structures are tension or crossover faults in the large block laying between the Main Break and a structural feature to the south. The Amalgamated Fault hosted resource previously mentioned does share similarities with the style of mineralization found in the South Mine complex, but as of yet, no convergence or cross-cutting relarionship has been established. It may well be that these tension faults in the South Mine complex originate from the main locus of the LCDZ further south.

Following the introduction of the gold bearing veins, faulting again took place. The earliest post-ore faulting appears to be the horizontal movements that are evidenced by the offsetting of later diabase dikes on the "Main break" and South vein fault. The Lake Shore post-ore fault is the largest transverse fault and has been traced from surface to the deepest workings. This fault dips steeply to the southeast. The east side moved down and north relative to the west side. The horizontal component of the movement is about 650 feet, and the vertical component is more than 300 feet. The Amikougami Creek, Sylvanite, and O'Connell Lake faults probably belong to the same period of post-ore transverse faulting as the Lake Shore fault.

#### LOCAL GEOLOGY

The seven mines in Kirkland Lake, of which only the Macassa Mine is still in operation, have produced in excess of 30 million ounces of gold at an average grade of about .49 oz/ton. At these mines, anticlinal veining plus multiple north-dipping and south-dipping veins are present in addition to ore veins along each Break The productive breaks are generally quite extensive laterally and have been mined down to 8200 feet.

The "Main break" or Kirkland Lake fault is thrust-fault vein structure striking about N.67°E. with a steep southerly dip, passing through all the 7 producing mines and has been identified to a depth of 7,000. It cuts through the Timiskaming sediments and the various intrusive rocks.

Geological sections enable the formations on either side of the fault to be matched, thus giving the amount of movement that has taken place. It is possible that the Kirkland Lake fault branches away from the Larder Lake "break" in the vicinity of Kenogami Lake. The principal structure is a thrust fault of some magnitude. The south side moved up almost vertically for 1,400 feet relative to the north side. There is no appreciable change in the dip of the main shear plane at either end of the Kirkland Lake camp. The fault is represented in some places by a single plane, in others by 2 or 3 planes spaced within a few feet or by fault planes, forming bows in the structure, which may be separated over distances of several hundred feet. Where more than one plane is present the ground between the faults is fractured by cross-over faults, and regions where these are plentiful provide the widest ore bodies.

Veins are also found on numerous subsidiary structures. Some on the minor faults formed coincidentally with the larger ones and others on tension fractures that were formed during release of the compressive forces. The tension fractures may parallel the major faults or may angle between these structures with dips varying from vertical to flat. Favourable locations for tension fractures are in the wedge-shaped blocks between the main faults.

In 1991, Battle Mountain Inc made a significant gold discovery in hole AK91-31 which intersected 9.70 g/t Au over 5.15m, on the Amalgamated Kirkland property, which is about 3000 meters south-west on strike from the Black claims. This new gold zone consists of pyritic quartz breccia veins associated a with brittle deformation zone, now named the "AK zone". This strong persistant break is located about two kilometres to the south and subparallel to the Kirkland Lake Main Break. Initial drilling programs beginning in 1993, defined a gold zone with the approximate dimensions of 500 m x 125 m x 5.1 m grading 7.4 g/t Au. The continuing exploration efforts to date (2012) have expanded this gold zone to a depth of about 600 meters, and a strike of about 800 meters. The mineral resource now stand at Indicated:1.2 Mt @ 4.5 g/t (164,000oz), and Inferred:1.5 Mt @ 4.2 g/t (207,000oz). It is notabe that a south west rake to the mineralized shoot that is similar to that of the Main Break 2000 meters to the north, is emerging from the released plotted data.

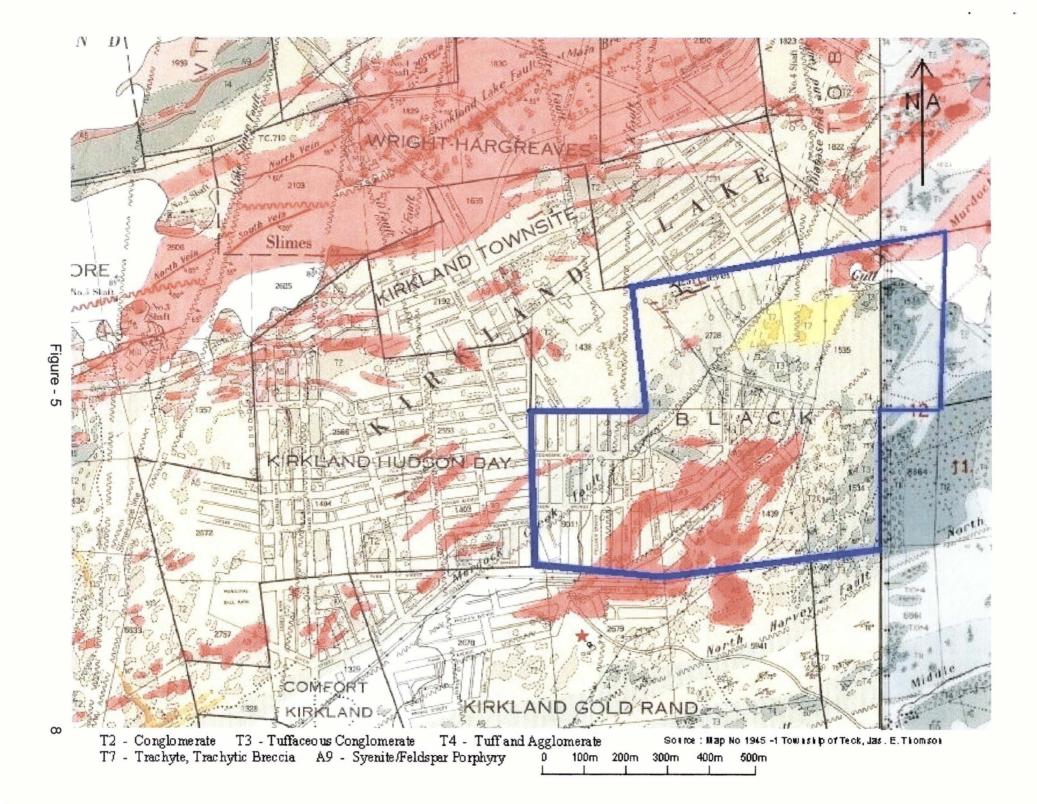
#### ORE OCCURRENCES

In the Kirkland Lake camp, fissure veins are the commonest type and are responsible for the larger ore bodies on the various faults. Other structures are representative of stockworks. breccia, and gash veins. Hard competent rocks such as the felsic or porphyritic syenites which failed under tension during different periods of movement along or near this line of weakness account for the majority of the ores mined along the Main Break. Quartz is the principal gangue mineral, though its proportion in the ores milled is relatively small. Some calcite is usually associated with the quartz. Other minerals in small amounts are albite, orthoclase, ankerite, barite, tourmaline, actinolite, and apatite. Secondary minerals are represented by sericite, carbonates, chlorite, and pyrite. Gold, last to be deposited, is found native in the gangue and in fractures in the wall rocks and earlier-formed vein minerals, and is present in calaverite (AuTe2) and petzite, (AgAu^Te. It is also associated with fine pyrite, which mineral constitutes about 2 percent of the ore by weight. Silver is associated with the gold and is also present in the petzite. Other minerals in the ores are chalcopyrite, hematite, galena, sphalerite, molybdenite, graphite, and the tellurides altaite (PbTe), coloradoite (HgTe), and melonite (Ni2Te3). The longest stoping length of ore is at the 3,000-foot horizon, where a length of 6,400 feet of ore was shared by the Teck-Hughes, Lake Shore, and Wright-Hargreaves. Of this, 2,600 feet lies on the "Main break" and the remainder on the North vein fault.

At the new South Mine complex, most of the new discoveries are sulphide zones rather than the quartz-vein hosted gold found historically, and comprise silicified pyritic tuff or porphyry with visible gold and tellurides. Adistinct buff colored albitic? alteration is evident in many zones.

It is important to note that even in a mining camp such as Kirkland Lake that has been the subject to a tremendous amount of exploration work, that as recently as the mid 1990's and 2005, new gold bearing structures are being found.

#### **CLAIM GEOLOGY**



located in Kirkland Lake directly south of, and contiguous to the Wright Hargreaves and the Toburn gold mines, two of the historic producing gold mines on the "Kirkland Lake Main Break".

The The property is underlain by Temiskaming aged sediments consisting of greywacke, polymictic conglomerate, tuff and small amounts of trachyte. Numerous Algoman aged feldspar porphyry dykes cut the sediments in a general east - west direction. This assemblage is the same as that of the productive mines adjacent to this property.

The property is eastward on strike of the very high grade, multi million ounce "South Mine Complex" presently yielding terrific exploration results for Kirkland Lake Gold on the adjacent property holding. Current drilling is successfully expanding the ore eastward. The Black Gold Mine property is the only land holding likely to host "South Mine Complex" gold presently available\* in Kirkland Lake.

Recent drilling by the holders of the Rand Gold Mine property contiguous directly south of the property has encountered a new high grade gold system only about 150 meters from the common boundary. It appears that this zone may trend onto the Black claims.

Favourable geology is present on the property. Proven gold bearing laterally extensive quartz veins previously discovered on the property. Potential for ore shoots in this vein system is quite good. Gold bearing veins/breaks of the Kirkland Lake camp were mined only 1000 feet north of this property, on the Kirkland Townsite Mine property.

#### PREVIOUS WORK

The key claim (shaft claim) to the north east of L71901 was acquired in the early days of the camp. On the extreme north west of the property, there are three parallel quartz veins/breaks which were exposed on outcrop. They are numbered 1, 2, and 3 from north to south. They strike slightly north of east and dip steeply to the south. Frequent showings of visible gold were noted along the veins.

In around 1917, an inclined shaft was put down 125 feet and about 40 feet of drifting was done on the #1 vein. The vein was exposed by this work as a narrow quartz stringer dipping steeply to the south. The reported assays gave up to .72 oz/ton across 1½ feet.

In 1935, a cross-cut was driven south fron the shaft on the 125 foot level. The #2 vein was drifted on for 205 feet to the east of the shaft, and for about 95 feet to the west of the shaft. Channel samples on the #2 vein showed values up to 2.52 oz/ton, with an average of about .21 oz/t for the entire 295 foot length of the vein.

In around 1937, a total of 13 drillholes were put down to search for the possible extension of the 1, 2, and 3 veins in the shaft-area and to investigate the nearby Murdock Creek fault. All holes gave numerous sections of gold values, with vein material assaying up to 1.4oz/t. Wide areas of alteration and pyrite mineralization are well detailed in the available drill logs. These vein system appears to have good continuity and been shown to be gold bearing across a strike length of about 500 feet to a depth of about 1000 feet, and is open on strike and dip.

Drilling of the Murdock Creek zone encountered a brecciated quartz-calcite zone with gold values across up to 39 foot core length, with one 8½ foot section assaying .128 oz/ton. This zone is open along strike and dip.

The property was dormant untill the late1960's when the mining rights reverted to the crown. In mid 1980 Strike Minerals acquired the property by staking. The mineral rights of claim L2728 was staked as L566424, and the mineral rights of claim L1535 was staked as L566425. Strike Minerals performed assessment work as follows:

In July 1981, an AQ sized drill hole was put down 101½ feet. The hole was located 400 feet east and 150 feet south of the #4 post of L566424. The drill log notes conglomerate for the length of the hole but there is no mention of the #2 vein. From the layout, it appears that the drill hole was collared to far to the north and overshot the #2 vein. The hole would not have reached the #1 vein before the completion depth.

In October of 1982 Strike Minerals sampled a 60 foot ± length of the #2 vein. Twenty samples were taken with the average being about .261 oz/ton for all the samples.

In October of 1983, an AQ sized drill hole B-2 was put down to a depth of 183 feet. The hole was located 600 feet west and 200 feet south of the #1 post of L566424. The #2 vein was encountered at 87 feet to 88 feet. No assays accompany the assessment report.

## WORK LOCATION MAP L71901, TECK TWP. LARDER LAKE MINING DIVISION BGM-3

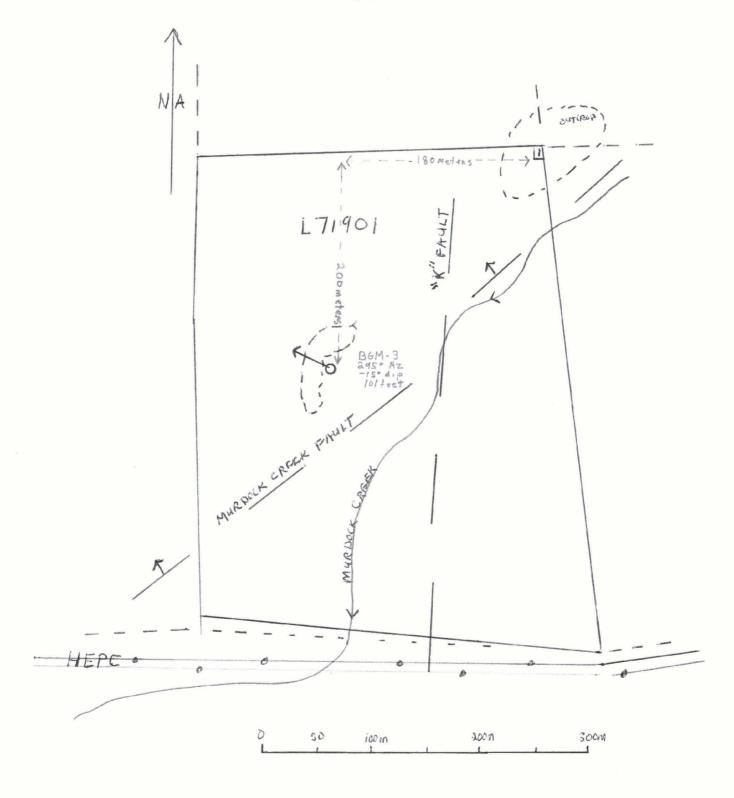


Figure - 6

In July of 1985, an AQ sized drill hole B-3 was put down to a depth of 101 feet. The hole was located 50 feet west of hole B-2. The #2 vein was encountered 41 feet down hole. No assays accompany the assessment report. None of the 3 holes went deep enough to cross the #1 vein.

Strike Minerals allowed the claims to lapse in 1995. The author of this report staked the claims when they came open in September of 1995. The claims were finally registered in the name of the author in April of 2007.

2007 to present - Ongoing sampling and geochemical studies are being done by the author to verify the auriferous nature of the exposed #2 vein and determine mineral associations. Assays of vein material showed up to .51 oz/t with average assay of about .25 oz/t and assays of pyritic wallrock assayed up to .25 oz/t with the average about .07 oz/ton. The sampling program was successful in verifying the auriferous nature of the #2 vein. The results were comparable to those of the prior sampling work. Further sampling was done in 2010 and 2012 to determine trace mineral-gold associations in the mineralized pyritic wall rock to the #2 vein.

No recorded work on L71901 exists in the MNDM files. Development has pretty much erased any historic pits and trenches which may have existed. The only mention of drilling occuring is made in the Thirty-seventh annual report of the Ontario Department of Mines, 1928 Vol. XXXVII, Part I where it is noted that during drilling work being done to assess the adjacent claim that:

"(in 1927) A diamond-drill hole was started on the Black claim and at a depth of 700 feet entered the Townsite property. This hole had reached a depth of 1,525 feet on April 8."

No other mention of historical woirk on this claim.

#### PRESENT WORK

During the winter of 2013 into March, a series of exploration X-Ray drill holes were done. This submission is about the 101 foot X-Ray drill hole at - 15° dip oriented at 295° astronomic that was put down on L71901 to assess a trachytic sequence partly exposed in outcrop.

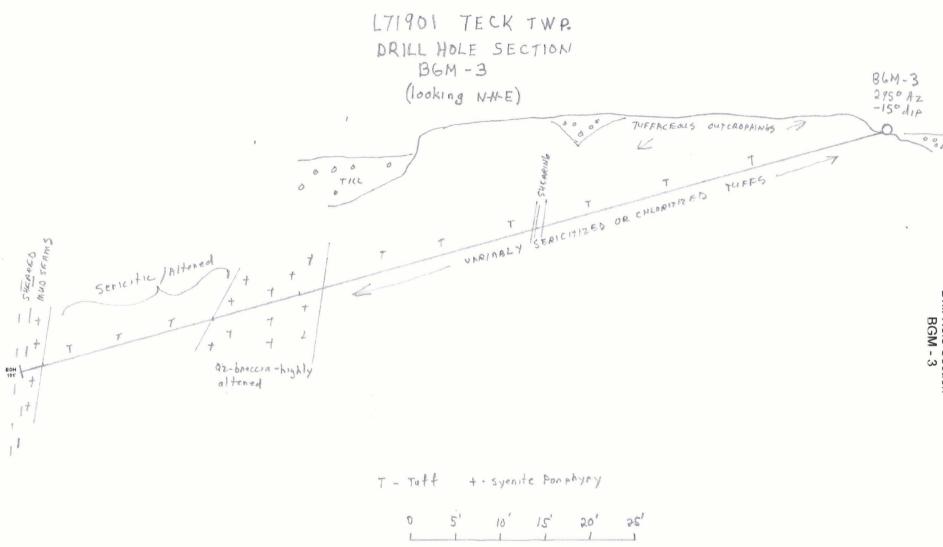
#### **RESULTS**

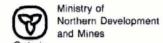
The hole cut variably chlorite and sericite altered, green to reddish tinged greenish, mildly magnetic trachytic tuffs for most of its whole length. Numerous quartz breccia veins were encountered. The rock is moderately carbonatized as 7% HCL bubbles well on fresh surfaces. The geology of this hole is very different from that of the previous hole #2 as to make correlating the different features very difficult. A strong sericitic alteration centered around a break/vein was encountered at about 67 to 77 feet down hole.

The 10 foot (core length) highly altered buff to beige colored section with fair fine pyrites was encountered between 67 feet and 77 feet. The section is similar in appearance and minerology to some of the economic systems in the Kirkland Lake camp. This was within a larger section of sericitic and chloritic altered trachytic tuffs. The section has much calcite quartz as open filling and replacement at the top and it is the vein material in contact at 67' with the wallrock, with brecciated fragments floating in the vein. By about 74', mostly altered rock and less open filling. There is much chloritic wisps and small replacements. Sericite occurs as replacements and fillings. Thin sericite wisps and stringers are numerous in the section and appear to have a trend or orientation of about 70° to core angle. The sulphides are all very fine making them difficult to see with a 16 power hand lens. Another intense sericite alteration occurs at the end of the hole just before another section of red altered porphyry which the hole ends in. Yellowish clay filled gaps in the rock from about 97' to the end of the hole would indicate open fracturing possibly open to the paleosurface with the fractured protolith talus being cored as the fragments of rock (which were all identical lithology) which were recovered. As fine sand was entering, the hole was stopped here to avoid losing any equipment in the hole.

#### RECOMENDATIONS

Sampling and geochemical assessment of the sludges followed up by sampling of the core should be completed.





Ministère du Développement du Nord et des Mines

Diamond Drilling Log

Journal de forage au diamant

Complete this form and related sketch in duplicate.

Remplir en deux exemplaires la présente formule et le croquis annexé Fill in on every page Remplir ces cases à chaque page

Hole No. Forage nº BGM - 3

Page No. Page nº 1

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Drilling Company Compagnie de forage		Collar Elevation Élévation du collier	North/Pesition du forage Avancement total du		7101000010110101101011011011011011011011	Map Reference No. N° de référence sur la carte	Claim No. Nº de concession minière
E Marion			par rapport au nord vrai forage 295° Ast. 101'	Coliar/collier -15°	126 Duncan Ave, Kirkland Lake	NTS 42/A1	L71901
Date Hole Started Date de commencement du forage	Date Completed Date d'achèvement		Logged by E Marion	1		Location (Twp. Lot, Con. or Lat. a Emplacement (canton, lot, concess	sion, où latitude et longitude)
March 5 2013	March 15 2013	Feb 15 2015		Ft./Pi		Teck Twp., Larder Lake M 180meters west and 200 m	
Exploration Co., Owner or Optionee Compagnie d'exploration, propriétaire ou	titulaire d'option		Submitted by (Signature) Déposé par (signature)	Ft./Pi		L71901	
7247915 Canada Inc		March 5 2015		Ft./Pi		Property Name Nom de la propriété	
				Et /Pi		BGM	

				1			Ft./P1									
		Rock Type	Description (Colour, grain size, texture, minerals, alteration			n, etc.)	Planty Feature Angle 1Angle de	e des Fortage †/Longues	Your Sample No. Nº d'échantillon	Sample Footage lèvement de l'éch	ge/Niveau de pré- chantillon (en pieds)	Sample Length Longueur de	Assays †/A	Analyses miné	ralurgiques	
From/De	To/À	Type de roche	Des	cription (Couleur, gr	anulométrie, texture, n	minéraux, transforr	nation, etc.)	caractéristic planés		du prospecteur		To/A	l'échantillon			
0	67'8"	Trachytic Tuff	Medium greenis	h greytuff trendin	ng to a pinkish grey	green in section	ns. Generally tuff wit	th		Sludge	0	20'	20			
			minor chloritized	or altered fragme	ents, though a secti	on with several	clasts to 3½" occur	s			20'	40'	20'			
			Reddish - pinkish	tinge due to amo	ount of grains crysta	als and fragment	ts of pinkish feldspa	ror			40'	60'	20'			
			pinkish trachyte.	Generally finer gr	rained tuff of about	1/10 mm to 1/5 n	nm size grains and fr	ags			60'	79'	19'			
			but increasing de	ownhole to about	1/4 mm to 1/3mm gr	ain sizes					79'	90'	11'			
			Whole section va	riably weakly to m	nild magnetic with m	nagnetite occuri	ng as grains and tiny				90'	101'	11'	( may be cont	taminated with su	rface sediment:
			masses sometime	es concentrated a	along "grain" of unit	t. Moderately mi	cro - fractured									
			throughout and a	all well cemented	with prodominantly	white calcite wi	sps and stringers wi	th								
			some quartz vein	s, with numerous	tight healed fractur	res displace all	others. Numerous of	the								
			stringers are of a	pinkish calcite ty	pe. Most discernab	le vein sets at a	bout 50° to 55° to C.	A.,						-		
			~65° to 70° to C.	A. and 35° to 40° to	o core angle, with a	flatter oblique	set at about 25° to co	ore								
			angle. Whole sect	tion moderately ca	arbonitized with 7%	HCL bubbling v	vell. All tuffs show a									
			hardness of less	than a nail. Pinpo	int size whitish pyri	ite and chalcopy	rite grains to about	1/2								
			mm generally les	s than 1% througi	hout but appears to	increase some	what down hole. The	top								
			of hole is somewi	hat chloritized wit	h some relict featur	res completely r	eplaced by chlorite,	but								
			is noted through	out all core. Som	e molybdenite may	occur in the mo	re heavily altered									
			sections down h	ole.												
		0 to 17'	chloritic, some be	dding? at 65° to 7	'0° to C.A. at about 6	6', 10' and 15'.Wi	apy sericite through	out.								
,			Fair increase at 1	5' of sericite												

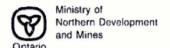
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<sup>\*</sup>For features such as foliation, bedding, schistosity, measured from the long axis of the core.

<sup>\*</sup>Exemples de caractéristiques : foliation, schistosité, stratification. L'angle est mesuré par rapport à l'axe longitudinal de la carotte.

<sup>†</sup> Additional credit available. See Assessment Work Regulation.

<sup>†</sup> Des crédits supplémentaires sont offerts. Consulter les règlements relatifs aux travaux d'évaluation. Nota : Dans cette formule, lorsqu'il désigne des personnes, le masculin est utilisé au sens neutre.



Ministère du Développement du Nord et des Mines

Diamond Drilling Log

Journal de forage au diamant

Complete this form and related sketch in duplicate.

Remplir en deux exemplaires la présente formule et le croquis annexé chaque page

Fill in on every page Remplir ces cases à

Page No. Page nº Hole No. Forage no

BGM - 3

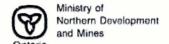
From/De	/ancement To/À	Rock Type Type de roche	Description (Colour, grain size, texture, minerals, alteration, etc.)  Description (Couleur, granulométrie, texture, minéraux, transformation, etc.)	Planer Feature Angle*(Angle des caractéristiques	Cote Specimen Footage †/Longueur en pieds des carottes	Your Sample No. N° d'échantillon du prospecteur	on levement de l'echantilion (en pi		Sample Length Longueur de l'échantillon	Assays 1/	Analyses miné	raiurgiqi
-Tom/De	TOTA	17' to 19'	bleached appearing. Pinkish alteration in spots. Several displacements noticible by abrupt	planés	prélevées	de prospecteur	Prom/De	10/A	1 Serial land.			
			bleaching hue change at tight slip planes at 45° to 70° to C.A. At 19', abrupt change along slip									
			plane at about 70° to C.A. back to less alterered more chloritic tuff. Pyrite as small specks and									
			aggregates to about 1/32"									
		24'8" to 25'	several "rusty quartz" veinlets and stringers at about 60° to C.A. Wall rock is also ankeritic?									
		30' to 45'	General increase of occurance of pinkish calcite as fillings and stringers									
		31'6" to 33'	Mottled or marbled yellow - green appearing with sericitic and chloritic alteration									
		39'6" to 39' 7"	Bleached wallrock to about 1/2 inch on both sides of a 1/8 sericitic/calcitic vein at ~ 24° to C.A.									
		39'8" to 40'	Calcite- quartz veining with pinkish streaks, upper contact about 24° to C.A. and lower contact									
			at about 90 to C.A.									
		46'11"	Qz-calcite breccia vein at about 60° to C.A. with small unbleached wallrock fragments									
		44'3"	1.5" banded sericite/chlorite at about 70° to C.A. with about 1/2" pinkish to buff bleaching on									
			lower wallrock.									
		47' to 63'	rock is more chloritic than sericitic, appearing more medium greenish									
		53' 4"	Sheared tuff at 70° to C.A. cemented with calcite Odd specks of pyrite					V				
		56' to 56'4"	Breccia - shearing at 55° to C.A. with 1/4" pinkish wisps and stringers. Some wall rock									
			fragments show rounding. A 3/16 pinkish calcite-quartz veinlet cuts across this at 150° to C.A.									
		64'4"	Veinlets and breccia at about 60° to C.A. Chloritic stringers. Rock downhole is now becoming									
			more sericitic again as wisps and replacements									
		67'1"	1/2 breccia vein at about 55° to C.A. Thin wispy sericitic contacts show tight bleaching.									
		67'4"	Buff-beige sericite replacement of feldspars and some fragments.									
''8''	77	Altered porphyry?	Highly altered porphyry dike ? Sharp upper contact at 60° to C.A. along a slip plane showing									
			slickening. Calcite/quartz vein breccia with bleached buff to beige fragments throughout. At									
			about 70', less open fill is evident. Bleached alteration shows much sericite as wisps and									
			replacements. Chloritic stringers and wisps randomly throughout. Fine pyrites as whitish									
			cubes and aggregates and odd chalcopyrite throughout. Fine grains of greyish black pyrite						Ŧ,		-	
			with a bluish tinge may be molybdenite. This striking alteration is common in the Kirkland Lake									

<sup>\*</sup>For features such as foliation, bedding, schistosity, measured from the long axis of the core.

<sup>\*</sup>Exemples de caractéristiques : foliation, schistosité, stratification. L'angle est mesuré par rapport à l'axe longitudinal de la carotte.

<sup>†</sup> Additional credit available. See Assessment Work Regulation.

<sup>†</sup> Des crédits supplémentaires sont offerts. Consulter les règlements relatifs aux travaux d'évaluation. Nota : Dans cette formule, lorsqu'il désigne des personnes, le masculin est utilisé au sens neutre.



0204 (03/91)

Ministère du Développement du Nord et des Mines

Diamond Drilling Log

Journal de forage au diamant

Complete this form and related sketch in duplicate.

Fill in on every page Remplir ces cases à chaque page

Hole No. Page No. Page n° BGM - 3

3

Remplir en deux exemplaires la présente formule et le croquis annexé

Angle 'Angle des caractéranques planes en péris des caractéranques planes en péris des caractéranques planes en péris des caracters en péris des caracters en peris de la caracter en p Sample Footage/Niveau de pré-Assavs †/Analyses minéralurgiques Footage/Avancement Sample Length Rock Type Description (Colour, grain size, texture, minerals, alteration, etc.) lèvement de l'échantillon (en pieds) Type de roche Description (Couleur, granulométrie, texture, minéraux, transformation, etc.) To/A From/De From/De ore systems. Unable to definitively tell if original rock was a trachytic tuff or a porphyritic svenite dike. 77' Irregular chloritic contact at about 45° to C.A with fragments in mostly calcite-sericite matrix. 97'1" Trachytic Tuff As above but heavily altered 77' to 79'4" Heavily altered. Yellowish almost all feldspar replaced grading to a purplish beige at 78' then by 79'4" back to greenish-vellow alteration color. 79'8" Sharp contact along slop plane at 60° to C.A. with sericitic calcite - quartz altered, becoming less sericitic by 81" then to a mottled sericite-chlorite alteration as above in hole. 82' to 84' Mottled appearing with much calcite filling and stringers displaced by tight random fractures. 83'10" 1/2 breccia vein at about 75° to C.A. with sericite wisps and small bleached tuff fragments. 84'2" 1/2 breccia vein at about 65° to C.A. with chloritic wisps 85'8" Numerous 1/4 core discs at about 90° to C.A. 86'8" to 86'10" Quartz carbonate banding appearing at about 60° to C.A. with sericitized bands of wall rock layered between the quartz stringers. 94' to 95' 7 gashy pinkish calcite/quartz stringers and fillings at randon angles to the core. Serecitic alteration becoming patchy appearing. 95' Increase in intensity of sericite alteration. By 96', all core a pale yellow-apple green hue. Many dark wisps and stringers. Much fine pyrite and odd molybdenite? 101 Altered porphyry Reddish porphyritic rock with whitish feldspars 1/8" to 3/16" in a hematized? fine grain groundmass 97'1" red altered porphyry 1' of core then wash out about 6" of hole. 97'6" to 99'6" wash/grind 14' of core from this section, the core that did come up is of a reddish altered porphyry. All pieces showed evidence of surface or soil interaction/exposure so this likely represents open clay-talus fractures or faults within the rock close to the paleosurface. 99'6" to 101' Reddish altered perphyritic svenite talus? as above, Fractured with open space filled with a yellowish clay with very fine silt, trouble getting the corebarrel up out fron this section so the hole was stopped. 101' End of Hole.

<sup>\*</sup>For features such as foliation, bedding, schistosity, measured from the long axis of the core.

<sup>\*</sup> Exemples de caractéristiques : foliation, schistosité, stratification. L'angle est mesuré par rapport à l'axe longitudinal de la carotte.

<sup>†</sup> Additional credit available. See Assessment Work Regulation.

<sup>†</sup> Des crédits supplémentaires sont offerts. Consulter les règlements relatifs aux travaux d'évaluation. Nota : Dans cette formule, lorsqu'il désigne des personnes, le masculin est utilisé au sens neutre

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