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2.58021

L1222121
Teck Township/District of Temiskaming
NTS 42 A/1
48°09'43" N 80°02'15"W

Summer 2017

INDEX

FIGURES

Kirkland Lake Resident Geologist's District

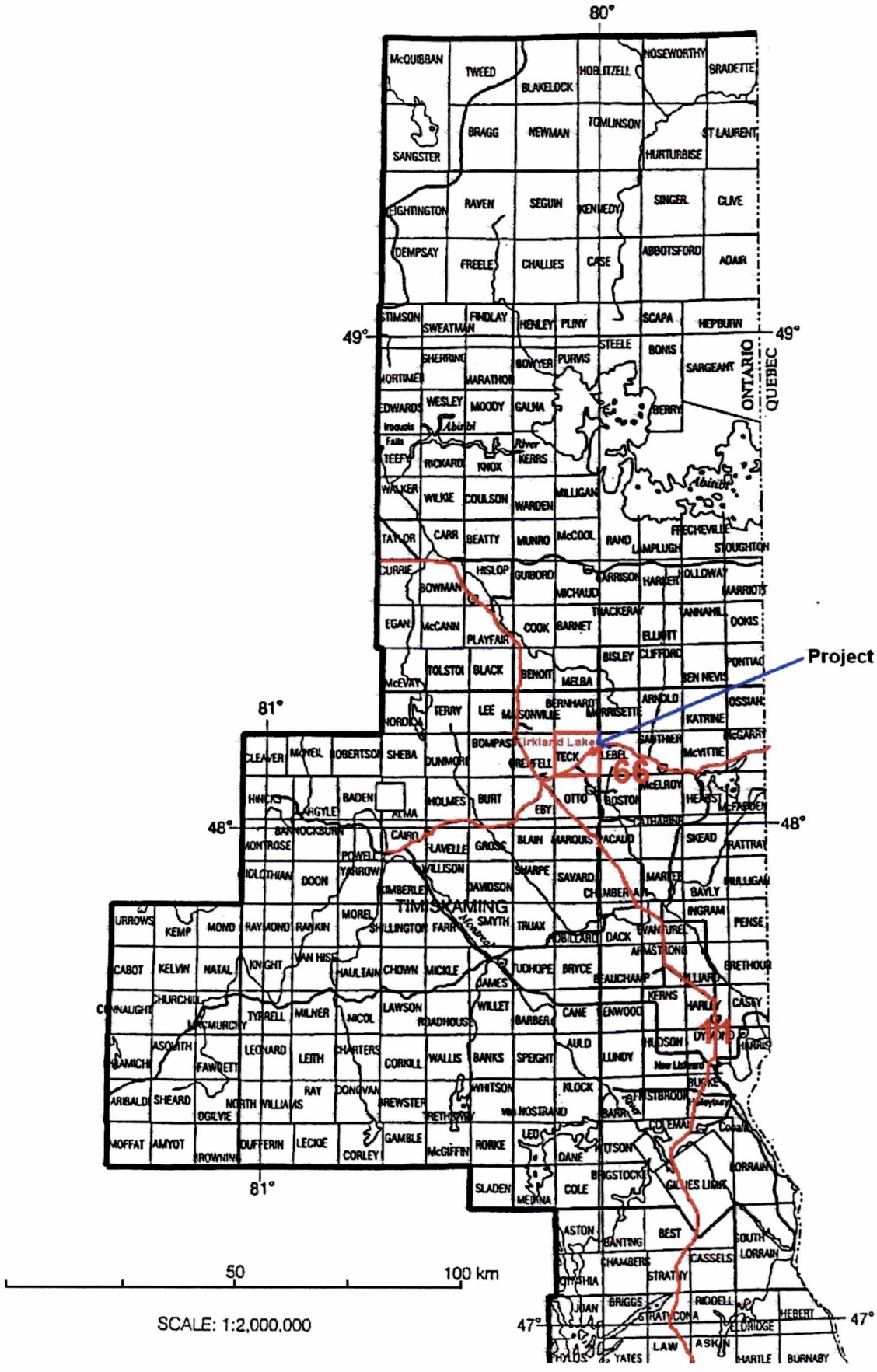


Figure - 1

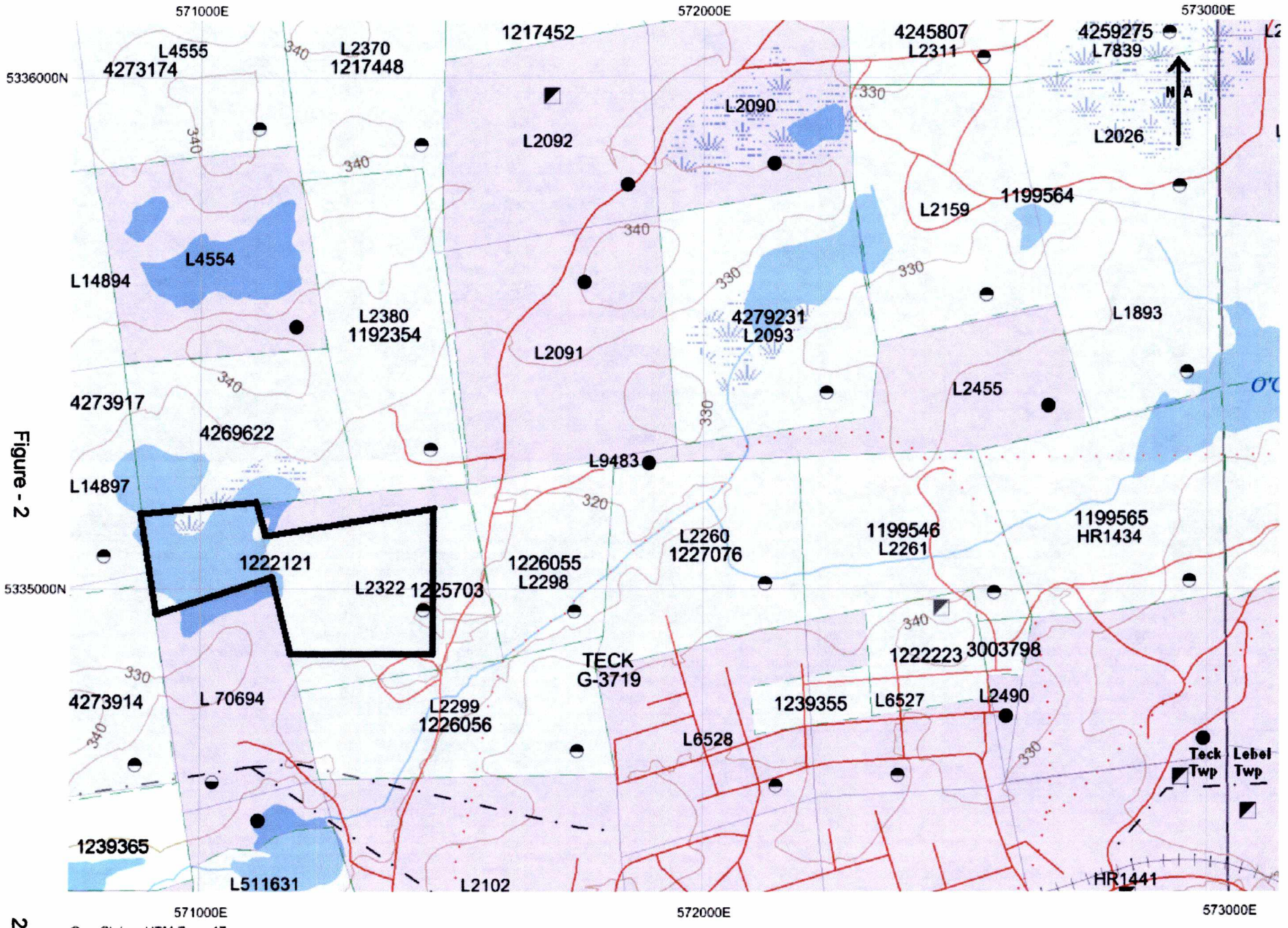


Figure - 2

Geo-Claims UTM Zone 17
1000m grid

PROPERTY LOCATION

Situated in north eastern Ontario in Temiskaming District, this property is located in the Larder Lake mining division bordering the north-west corner of the town of Kirkland Lake. This is in the Kirkland Lake Resident Geologist district and can be found on NTS 42 A\1 with the geographic center being at approximately 80°02'15"W and 48°09' 43"N. Services, ammenities and a local workforce are readily available in this mining friendly town.

ACCESS

Turning north off of Highway 66 (Government Road) at Duncan Avenue and heading north on this street for 400 meters will cross over a set of railway tracks. Continuing north for about 350 more meters will take you to an old trail heading north east onto the claim. Following this trail for about 250 meters from the paved road will bring you to the claim.

CLAIM

Claims L1222121 is a one unit staked mining claim staked totaling approximately 10 hectares, recorded on Plan G-3917 of Teck Township.

GENERAL GEOLOGY

This area is in the Abitibi Greenstone Belt of the Superior Province, in a region dominated by Archaen mafic to felsic pillowed, massive and agglomeratic volcanics and granitic batholiths with attendant intrusions, with minor clastic interflow and fluvial sediments.

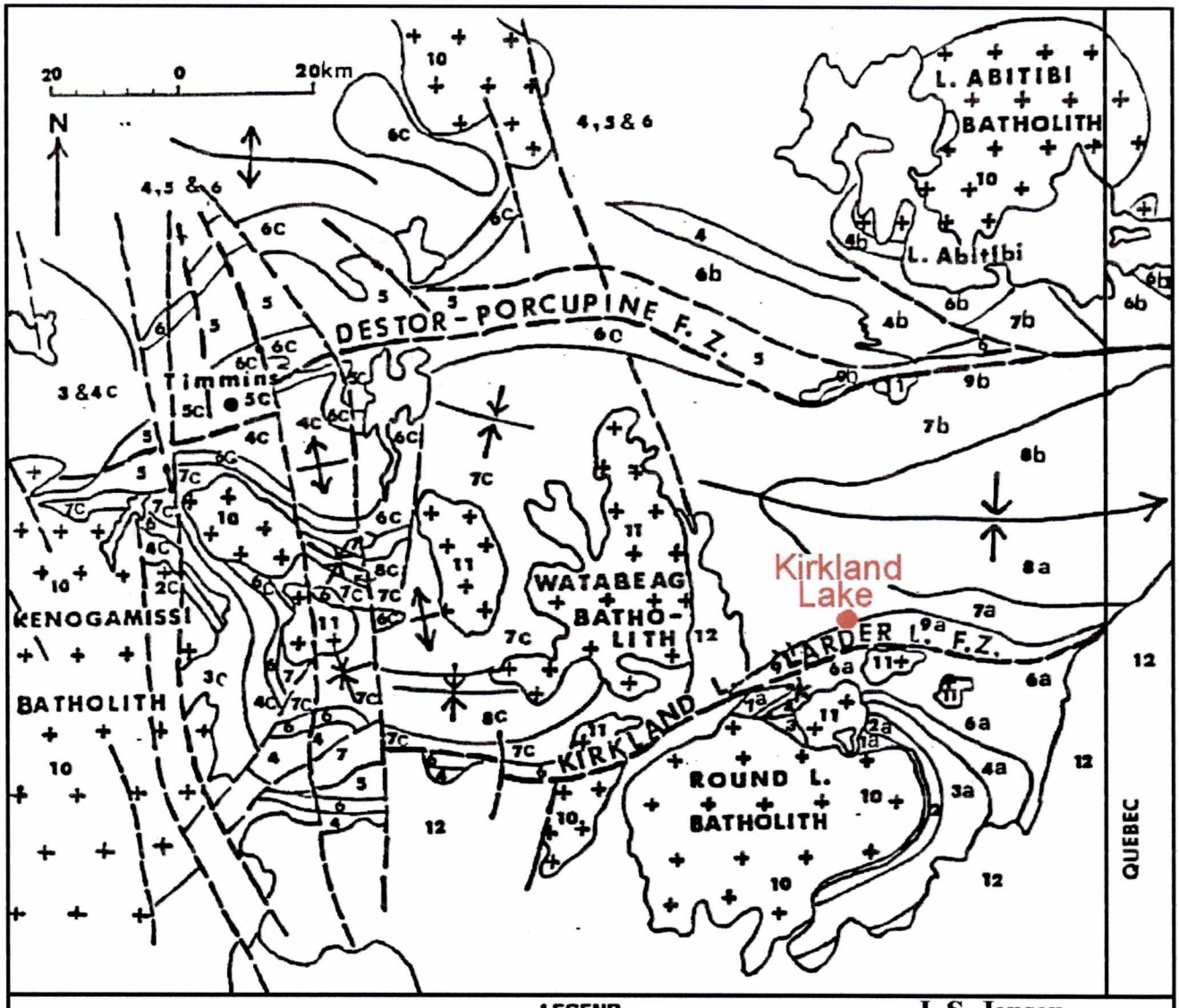
"All exposed bedrock in the Kirkland Lake - Larder Lake area is Precambrian. Archean volcanic, sedimentary, and intrusive rocks contain the mineralization of economic interest. Near Kenogami Lake in the west, and Kerr Addison in the east, relatively flat-lying Proterozoic sedimentary rocks cover the older folded formations. Pleistocene deposits of sand, gravel, and clay mantle about 90 % of the bedrock. Archean volcanic rocks with inter-bedded slate and chert are the oldest rocks (2.747 Ga to 2.705 Ga) and range from komatiite to mostly iron and magnesium-rich tholeiites at the stratigraphical base to calc-alkaline volcanic rocks at the stratigraphical top. These rocks contain long narrow bodies of diorite and gabbro as well as coarse-grained flows. Timiskaming-type interbedded sedimentary and volcanic rocks, also Archean in age (2.680 Ga), unconformably, overlie the older volcanic rocks. They form a long, relatively narrow east-trending belt intruded by syenite (2.673 Ga). Lamprophyre dikes are widespread and most of the "diabase" is of the "Matachewan" swarm of north-striking dikes (2.485 Ga). Overlying all the above rocks with great unconformity are Proterozoic undeformed Huronian sediments of the Cobalt group intruded by Nipissing Diabase (2.200 Ga). Jurassic age diamond-bearing kimberlite pipes are found east of Kirkland Lake and Matheson". *(ref Lovel 1967)

The Larder - Cadillac Deformation Zone (LCDZ), a major east-west structural control on gold bearing alteration and mineralization, which in much of its length coincides with a folded and deformed sinuous belt of sedimentary rocks of conglomerate, sandstone and volcanic tuffs. The LCDZ is a carbonatized shear zone characterized in some places by the presence of quartz stockwork, and green mica. It is considered to be the western extension of the Malartic-Cadillac Deformation Zone, a more than 160 km long. The deformation zone is a south-dipping reverse fault, the south side of which seems to have moved upward and eastward relative to the north side.

Locally, the Larder Lake Deformation Zone has been traced at intervals from east of Kerr Addison mine to west of Kenogami Lake. It is exposed about 2 km south of the gold mines of Kirkland Lake. Kirkland Lake "main break" is a fault zone branching northeastward from the LCDZ in the vicinity of Kenogami Lake. It passes through all the gold mines at Kirkland Lake, and has been identified to a depth of more than 2 km. Relative to the north side, its south side moved up 460 m almost vertically. The fault zone varies from a single plane to multiple bifurcating planes.

The gold mines at Kirkland Lake occur in a single geological orebody 5 km long and more than 2.4 km deep. The longest stoping length of ore is at the 3,000-foot level (914 m), where 2000

General Geology of the Kirkland Lake Area



LEGEND L.S. Jensen

Proterozoic

Keeweenawan diabase (not shown)

12 Cobalt Group

Archean

Matachewan diabase (not shown)

Granitic rocks

11 Granodiorite, monzonite, quartz monzonite, syenite

10 Massive to gneissic quartz diorite, tonalite, trondhjemite

Upper Supergroup

9 9a* Timiskaming Group, 9b** Destor-Porcupine Complex

8 8a, 8n, Blake River Group, 8c*** Blake River (Upper Fm., Tisdale Group)

7 7a, 7b, Kinojevis Group, 7c Kinojevis Group, (Middle Fm., Tisdale Group)

6 6a Larder Lake Group, 6b Stoughton Roquemaure Group, 6c Lower Fm., Tisdale Group

5 5c Porcupine Group

Lower Supergroups

4 4a Skead Group, 4b Hunter Mine Group, 4c Upper Fm., Deloro Group

3 3a Catherine Group, 3c Middle Fm. Deloro Group

2 2a Wabewewa Group, 2c Lower Fm. Deloro Group

1 1a Pacaud tuffs****

*a refers to Kirkland Lake Area, south limb of synclinorium (Jensen 1978c, 1979).
**b refers to Kirkland Lake Area, north limb of synclinorium (Jensen 1976, 1978b).
***c refers to Timmins Area (Pyke, 1980).
**** (Goodwin, 1965).

Figure - 3

meters length of ore were shared by Teck-Hughes, Lake Shore, and Wright-Hargreaves. All ore is in or near the Kirkland Lake "main break" and subsidiary faults.

In the Kirkland Lake area, gold exists in all types of rock, but 85 percent of the ore is in syenitic plugs and trachytic flows in the belt of Timiskaming-type sedimentary rocks. The center of the Kirkland Lake gold mines (at Teck-Hughes) is occupied by an irregular pipe-like felsic syenite body the dimensions of which is 300 m by 500 m at surface. These dimensions increase greatly with increasing depth and appears to "bulge" more to the south.

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. A distinct buff colored albitic? alteration is evident in many zones. These zones lay much flatter than the Main Break system and are interpreted to be a "cross over" type faulting passing between the Main break series of faults and a as of yet unknown southernly fault system, possibly directly related to the LCDZ which does also occur to the south.

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.

Post-ore strike-faults and transverse faults offset some of the ore bodies. The largest post-ore fault, the Lake Shore transverse fault, extends from surface to the deepest workings. It dips steeply southeast, and its east side moved down 100 m and north 200 m relative to its west side. The fault has been mapped north from the Main Break through the claim area and on to the Goodfish Lake area where it appears to roll into or be truncated by a more easterly trending fault system. Gold occurs in this area proximal to north east trending shears and the Lakeshore fault splays. At the Kirana Mine, gold ore was developed in pyritic silicious zones associated with the sheared contacts of the volcanic rock with the felsic porphyries.

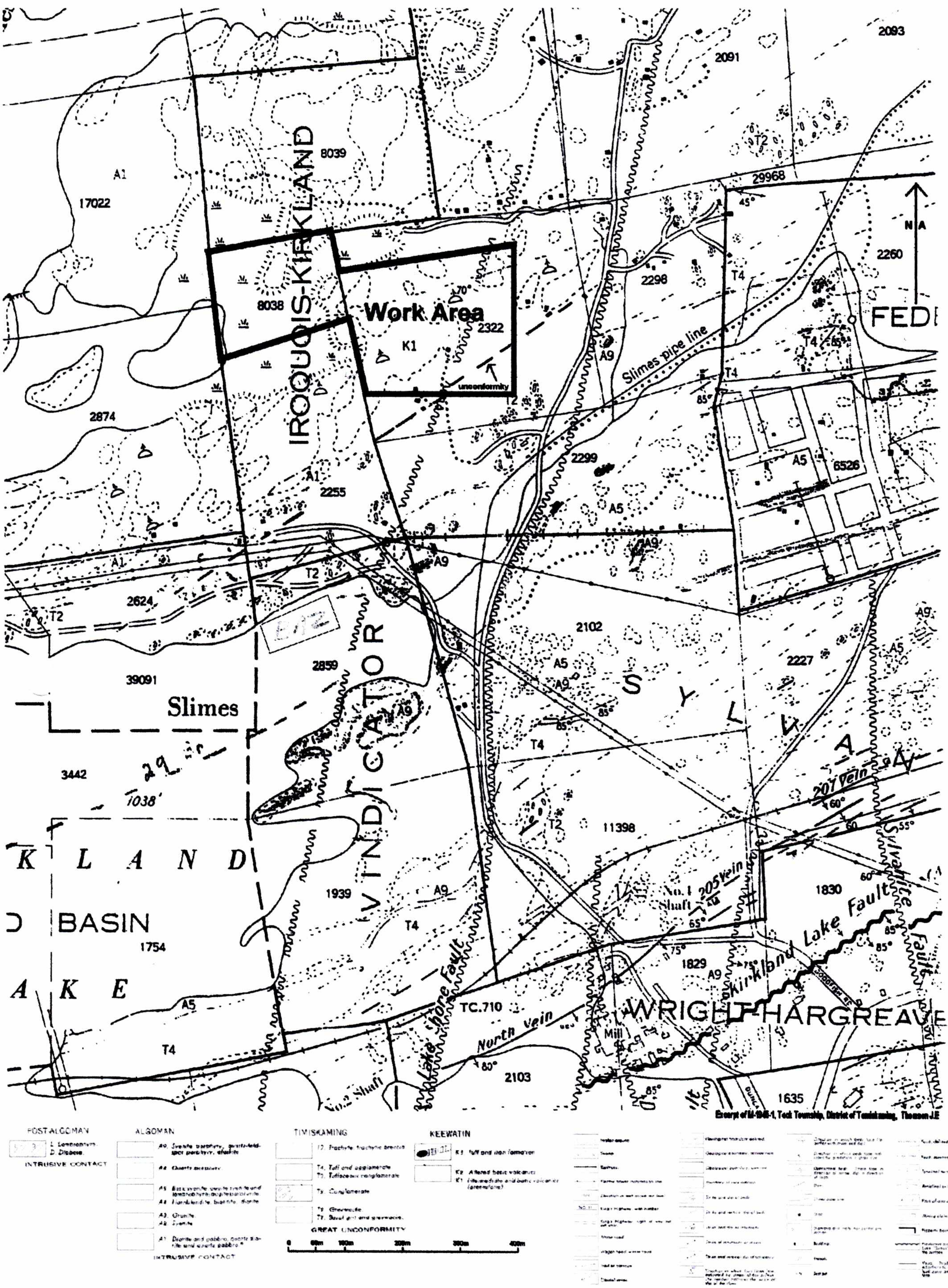
CLAIM GEOLOGY/PREVIOUS WORK

The geology of Teck Township is discussed at length in the 1928 report by E. W. Todd and I would refer the interested reader to this publication. The geology of Teck Township has been covered extensively by various authors and many thesis papers and mine reports have been published over the last 100 years Much information on this township is in the Resident Geologists office in Kirkland Lake. The Kirkland Lake camp has also attracted the labour of countless other prospectors and explorers whose work was never documented but the many slumped and part filled pits and trenches scattered throughout the area attest to their efforts.

The claim lays just to the north of the the Kirkland Lake Main Break. The claim claim straddles and sits mostly on the north side of the faulted Temiskaming-Blake River contact. This "unconformity" has been explored on strike of the claim by various operators over the history of the camp. Several shafts and drill holes have encountered gold values, but far more extensive work would be required to properly evaluate this structure. With the exception of a limited area in the region of the #2 post of claim L122121 which are Temiskaming Sediments, all the rock on claim L1222121 are Blake River volcanic rock in contact with a mafic (gabbroic) intrusive dominating the west part of the claim.

Eight core holes have been drilled on claim L1222121 in past years by Newfields Minerals, Zenda Capitol Corp and most recently by Vault. These holes were oriented to intersect a north south break system. These seven collar locations with azimuths of the holes were field mapped by the author and mapped to the present grid in about 2005. These prior drill holes intersected anomolous gold values in several holes. Several other holes were done in the region just east of the claim to assess parallel gold bearing features likely associated with the Lakeshore Fault system. The features targeted were encountered in the drilling and gold values were generally low. The drilling did confirm strike and geometry of some of the fault features.

Newfields hole #26 intersected .498oz/ton across 1.1 feet, about 170 feet vertical from surface. Zenda drillhole #04-1 encountered 14.75gAu/t over 1 meter (.458oz/t~3.3') at about 50 feet vertical from surface on the same structure..Zenda drillhole #04-2 may have overshot the structure in the overburden but did intersect a 1.75gAu/t over a 1.1 meter section down hole from the intended target. Another section ten meters deeper gave about .9gAu/t over .7 meters.



IROQUOIS-KIRKLAND
Work Area
K1
8039
8038
2322
17022
A1
2874
unconformity
Slimes pipe line
29968
2091
2093
2260
2298
2299
2255
A9
A5
6526
FED
2624
T2
T4
39091
Slimes
2859
VINDICATOR
SYLVA
2102
2227
3442
1038'
K L A N D
BASIN
A K E
1754
1939
11398
1830
207 Vein
205 Vein
No. 1 Shaft
Kirkland Lake Fault
Lake Shore Fault
1829
TC.710
North Vein
WRIGHT-HARGREAVE
Mill
2103
1635
Excerpt of M-1945-1, Teck Township, District of Temiskaming, Thomson J.E
POST ALGOMAN
ALGOMAN
TIMISKAMING
KEEWATIN
INTRUSIVE CONTACT
GREAT UNCONFORMITY

Figure - 4

Stripping of an area south and on strike of the gold bearing drill holes area was conducted for Zenda by T. Oconner In about 2004. At the south end of the strip area, the vein was shown to be approximately 2 m wide for about 4 m of strike length before weakening into a series of 0.15 m wide shears that trend NNE and network along different structures from each other. Surface sampling/assays if any of channel sampling have not been released or documented on this vein.

In June of 2005, a 2.5 km total field magnetic survey was completed by D. Robinson on claim L1222121 on a field grid cut by the claim holder the same year. The survey outlined a roughly circular magnetic feature within the claim boundary. This appears to reflect a possible pipe like structure associated with the gold bearing alteration/veining/shearing in the area of the Newfields/Zenda drill holes? Mapping of outcrops and former drill sites as well as claim posts and cultural features was completed and referenced to the survey. A random grab sample of the original trench of the break exposed on the southern trenched area on this fault system assayed at up to 1oz/ton. (ref:Resident Geologists files). This trench is mapped the area of this report also.

In the spring of 2006, six diamond drill holes totaling 685 metres were performed for Vault Minerals in around the immediate claim area. These holes focused on two areas having structural systems and epithermal veining with similar alteration, composition and mineralization to epithermal veins mined along the Kirkland Lake Main Break. The drill program was designed specifically to understand structural & vein geometry of the targeted shear-breccia systems, gold concentrations & continuity within these systems and mineralization-alteration characteristics.

Drill holes MB07-02 to 05 were designed to follow-up on historic drill hole T1-2000, located about 100 meters to the east of L1222121 that intersected 22.6 g Au/t over 1.2 m in a sheared mafic volcanic breccia with sericite-chlorite alteration, quartz-ankerite veining and pyrite mineralization. Dolomitic alteration is noted in a drill log of hole 2004-1 performed just to the west of hole T1-2000 which was drilled to test another strong shear with a pinching and swelling 4 to 18 inch smoky quartz vein exposed on surface for about 100 meters. Drill holes MB07-02 to 05 were designed to test the shear-vein system and the hanging wall breccia zone for gold concentrations & continuity, mineralization characteristics and structural & vein geometry. This was accomplished.The origin/control of gold mineralization in the breccia zone is inconclusive. The zone may represent a primary volcanogenic flow-top breccia that had been exploited by later shear-bands/fractures and allowed for hydrothermal mineralized fluid migration. The zone may also represent a tectonic-breccia feature, in close proximity to the Timiskaming-Blake River unconformity that has been acted as a conduit for mineralized fluids. These features likely cross into L1222121 at a point under overburden cover about midway between the #1 post and the #2 post. Since the structures dip steeply to the west-north-west, they would probably enter into the claim at depth. (ref:afri-200720004215)

Drill holes MB07-06 and 07 were designed to test the Newfield/Zenda shear shear-vein system as it occurs on L1222121, for gold concentrations & continuity, vein geometry and mineralization characteristics. This vein strikes 025° azimuth, dips 80° NW, has a true width of 1.5m less to than 0.5 m, down to at least 60m below surface with elevated gold and molybdenum concentrations. Continuity of structure and alteration/mineralization were confirmed.

It is noted that the Lake Shore fault represents a 'significant' sinistral (east-side down displacement) cross-fault that may have multiple associated strain splays, stepover veins or proximal structural traps and that may have acted as a conduit for mineralized hydrothermal fluids. Both the shear system to the east of claim L1222121 and the Newfield/Zenda shear systems consist of epithermal veining contain elevated gold, silver and molybdenum concentrations and have similar composition-alteration mineralization characteristics to that of Kirkland Lake 'Main Break' veining. The shear-veining systems may widen at depth & along strike and may have companion, parallel structures.

In the fall of 2007 Vault Minerals drilled an additional four holes, in which hole MB-07-11 cut the Newfields/Zenda shear-vein as a section of pyritic vein in the volcanics which assayed 8.36gAu/t over 1/2 meter about 25 meters below the Zenda hole. In the same hole another section which ran 2.33gAu/t over 1.1 meters was intersected ten meters further down hole. A .65 meter section assayed 1.09gAu/t about 38 meters downhole beyond the target vein. All values were

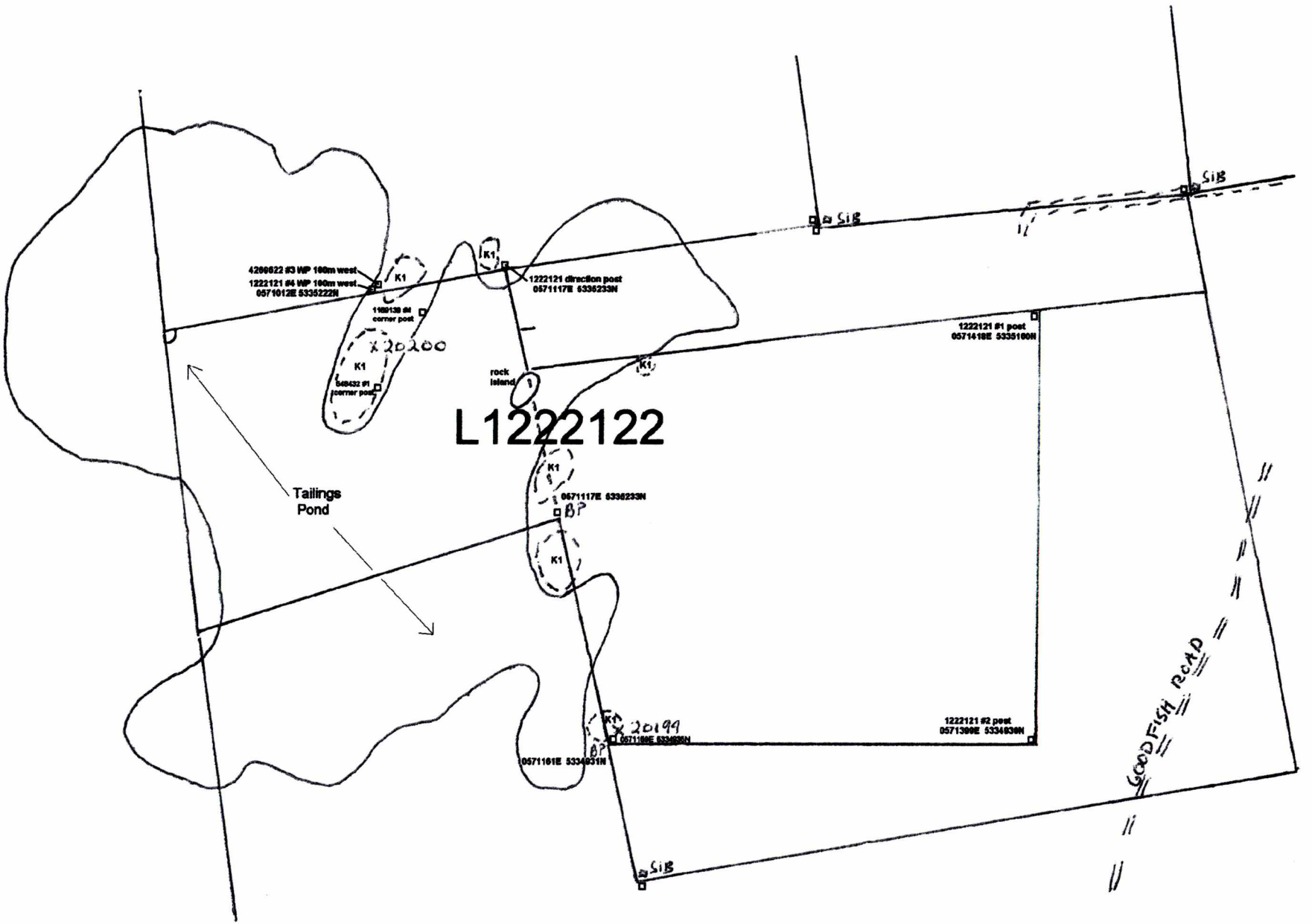

L1222122
Tailings Pond
4200622 #3 WP 100m west
1222121 #4 WP 100m west
0571012E 5335222N
1222121 direction post
0571117E 5336233N
1222121 #1 post
0571618E 5335160N
1222121 #2 post
0571308E 5334836N
0571161E 5334831N
0571117E 5336233N
X20200
X20199
rock island
K1
BP
SIB
GOLDFISH ROAD
0 50M 100M 150M 200M 250M
SIB - SQ IRON BAR - SURVEY PIN
OUTCROPPING
X20200 - SAMPLE LOCATION
K1 MAFIC VOLCANIC ROCK
CLAIM POST - WITH UTM'S

Figure - 5

associated with shearing, quartz veining and 5 to 10% pyrites, +/- molybdenite or silver. The shearing which appears to control the gold and metal concentrations was intersected in all the drill holes, though not always associated with significant attendant metal enrichments. Vault suggested that the Lake Shore fault represents a 'significant' sinistral (east-Side down displacement) cross-fault that may have multiple associated strain splays, stepover veins or proximal structural traps and that may have acted as a conduit for mineralized hydrothermal fluids.

Not typical of Kirkland Lake style gold environments is that these mineralized break systems are entirely within the volcanic rocks and is oriented at 30° to 45° to the historically worked trends.

In the summer of 2015, light hand stripping and mapping were done on the area of the previous Zenda work. The area exposed was somewhat bleached appearing variably carbonatized Blake River fine grained pillowed mafic volcanic rocks of a grey-green colour with numerous randomly oriented quartz-carbonate veinlets and stringers with or without chlorite. Ductile-brittle shearing and brecciation was evident across the workings at about 022° to about 025° astronomic. Much of the exposed rock shows iron carbonate alteration, sericite is more evident proximal to the more veined or strained areas, and chlorite occurs throughout in varying amounts.. White and lesser yellow/brassy pyrite occurs randomly as grains, sprays, odd stringers and fine points throughout but probably averages less than 2%. Follow up sampling indicated the most western vein/shear exposed shares similar geochemistry to the gold mineralized core from the historic drilling on the structures to the north.

PRESENT WORK

In the summer of 2017 a field visit was made to the north-west claim around the pond area. Data for claim markings and other features were noted and some previous waypoints are appended. Little aquatic life was noted in the waters of the pond likely due to the encroachment of the mining tailings onto and into the waters along the west side of the pond. The tailings do not appear enter upon the western boundary of L1222121. The water level of the pond seems to be sustained by an old beaver dams at the south extremity.

RESULTS

All outcrops visited were of predominantly pillowed to massive grey green to dark green mafic volcanic rock. Some light magnetism was noted randomly throughout but none strong enough to affect the compass needle noticibly from a standing position. No work was done to define facing directions or dips. Where observed selvedges were chloritic and interstitial areas were mostly breccia fragments and masses of chloritic to calcitic material. Many had various sized small aphanitic dark grey to black angular shards. Some light magnetism was noted in the interstitial areas material so possible magnetite grains. Silvery to brassy pyrite grains from fine pinpoints to about 1mm, and small aggregates were found to occur through most of the rock. No signifigant concentrations were observed. Two samples with thin quartz-calcite veinlets and fine pyrite grains were collected and submitted for assay. Follow up work is not anticipated at this time.

SAMPLES

#20199 Quartz-calcite veinlets in fine grained, medium grey green, volcanic, angular pit? muck. Non magnetic, dilute HCL bubbles weakly on veinleys. May be an old slumped in trenching or stripping about 4 meters long oriented at about east-west. Odd brassy and whitish pyrites about .5mm in size in both veinlets and wallrock. Very light bleaching of wallrock noted adjacent to veinlets. Addition manual work may be done to clean to bedrock to satisfy geologic curosity.

#20200 Quartz-calcite wisps oriented at about east-west in fine grained, medium grey green, lightly carbonated (dilute hcl bubbles weakly) mafic volcanic rock. Non magnetic. Outcrop shows weak E-W shearing or fracturing. Odd brassy and whitish pyrites.

The shear systems on the east end of the property remain the valid target for further exploration. Gold mineralization at the Kirkland Lake camp occurs in epigenetic structurally controlled deposits localized along "breaks", in veins as quartz-filled fractures and breccias. Gold mineralization is located along the breaks and subordinate splays as fracture fill quartz veins several inches to 5 ft thick. Veins may be single, sheeted or stacked morphology. Gold is usually accompanied by 1% to 3% pyrite. Wallrock alteration is commonly hematization or bleaching with carbonitization, silicification and locally sericitization (Kirkland Lake Gold Inc, 2003). The system of epithermal veining previously encountered on L1222121 contain elevated gold, silver and molybdenum concentrations and have similar composition, alteration and mineralization characteristics to that of Kirkland Lake 'Main Break' veining. The shear-veining systems may widen at depth & along strike and may have companion, parallel structures. Work undertaken to further define the extent of the mineralization in context of the "shoot" like nature of gold environment in Kirkland Lake is warranted. It is hoped that eventually, an option agreement or financing will allow for a targeted core drilling program to futher define that potential .

DATA

Waypoint Data

4269622 #3 witness post 0571012E 5335222N
1222121 #4 witness post 0571012E 5335222N
1222121 direction post 0571117E 5335233N (4 to 1)
1169139 #4 historic corner post 0571060E 5335178N
548482 #1 historic corner post 0571011E 5335140N
sample #20199 0571034E 5335176N
sample #20200 0571159E 5334935N
1222121 #1 post 0571418E 5335160N
1222121 #2 post 0571399E 5334930N
1222121 direction post 0571161E 5334931N (2p to 3p)
1222121 direction post 0571117E 5335233N (2p to 3p)
1226056 #4 post 0571134E 5335048N

Swastika Laboratories Ltd

Established 1928

Assaying - Consulting - Representation

Assay Certificate

Certificate Number: 17-1257

Company: **Eric Marion**

Project:

Report Date: 26-Jun-17

Attn: Eric Marion

We hereby certify the following Assay of 6 rock/grab samples submitted 20-Jun-17 by Eric Marion

Sample Number	Au FA-MP ppb
[redacted]	
20199	107
20200	15

Certified by Valid Abu Ammar

1 Cameron Ave., P.O. Box 10, Swastika, Ontario P0K 1T0
Telephone (705) 642-3244 Fax (705) 642-3300

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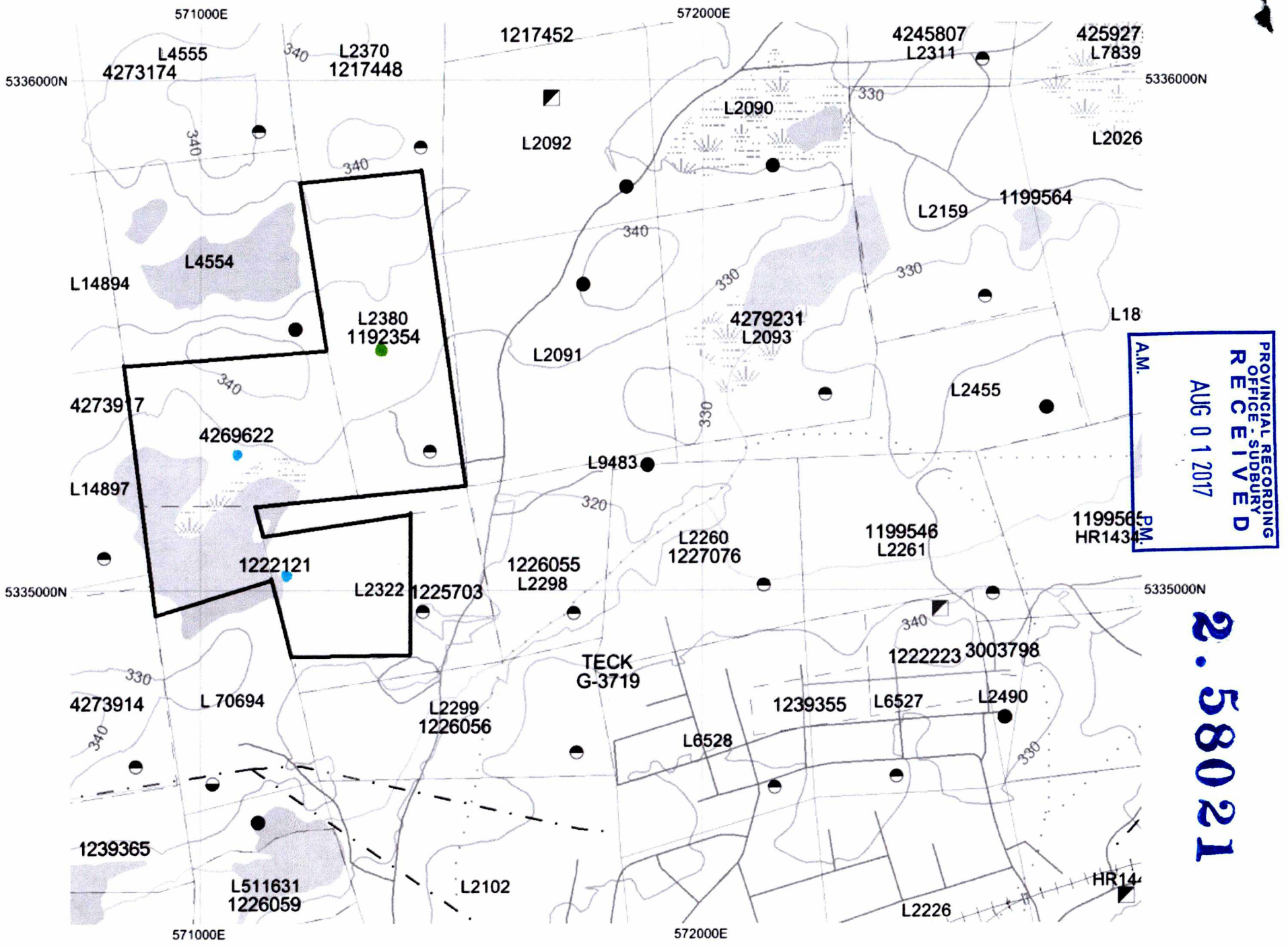
Kirkland Lake Assessment Files -



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