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2.56940

L4245813

Eby & Otto Townships

NTS - 42 A/1

80°08'47"W 48°04' 36"N

Summer 2016

PROVINCIAL RECORDING
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JUN 21 2016
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Kirkland Lake Resident Geologists District

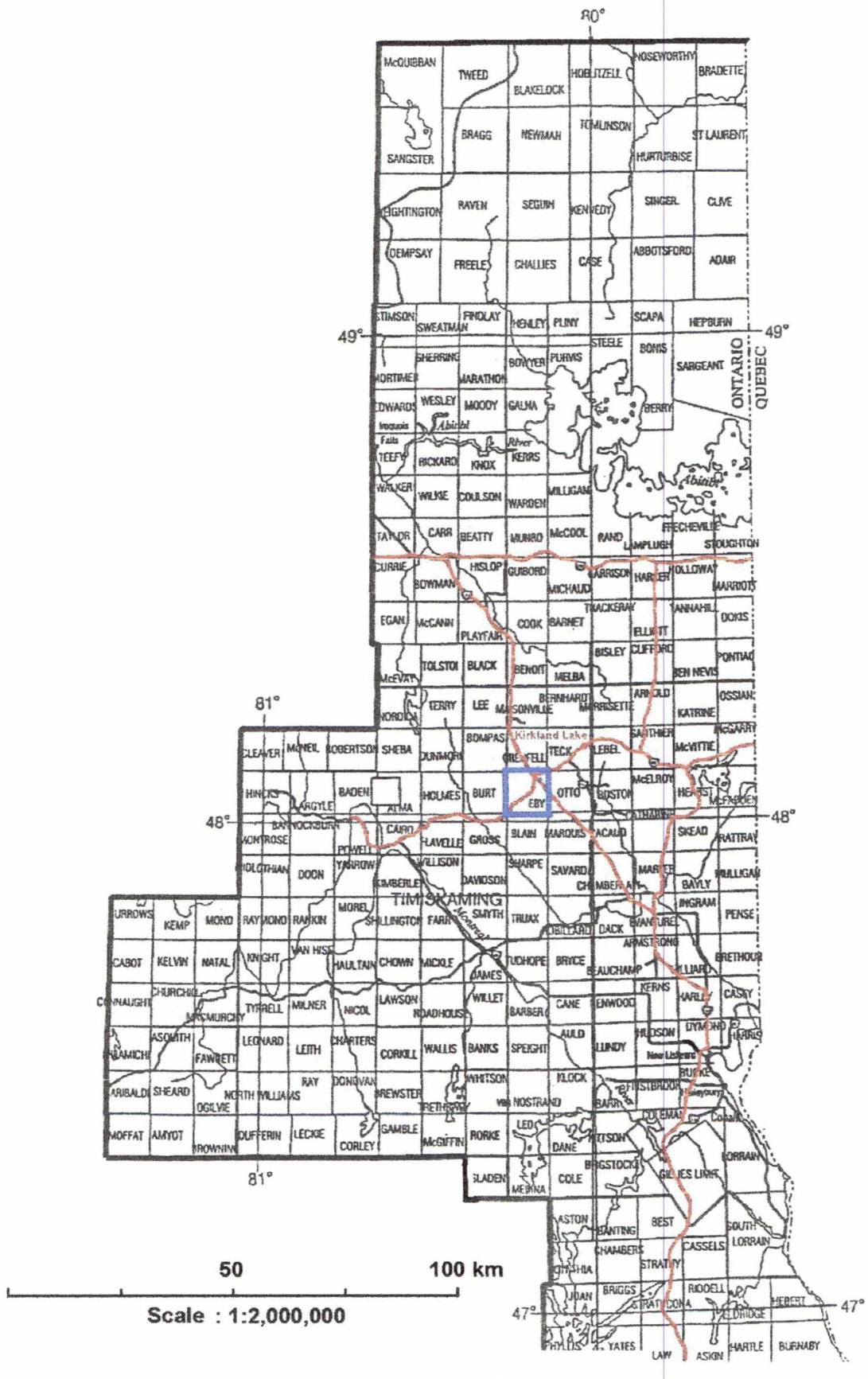


Figure - 1

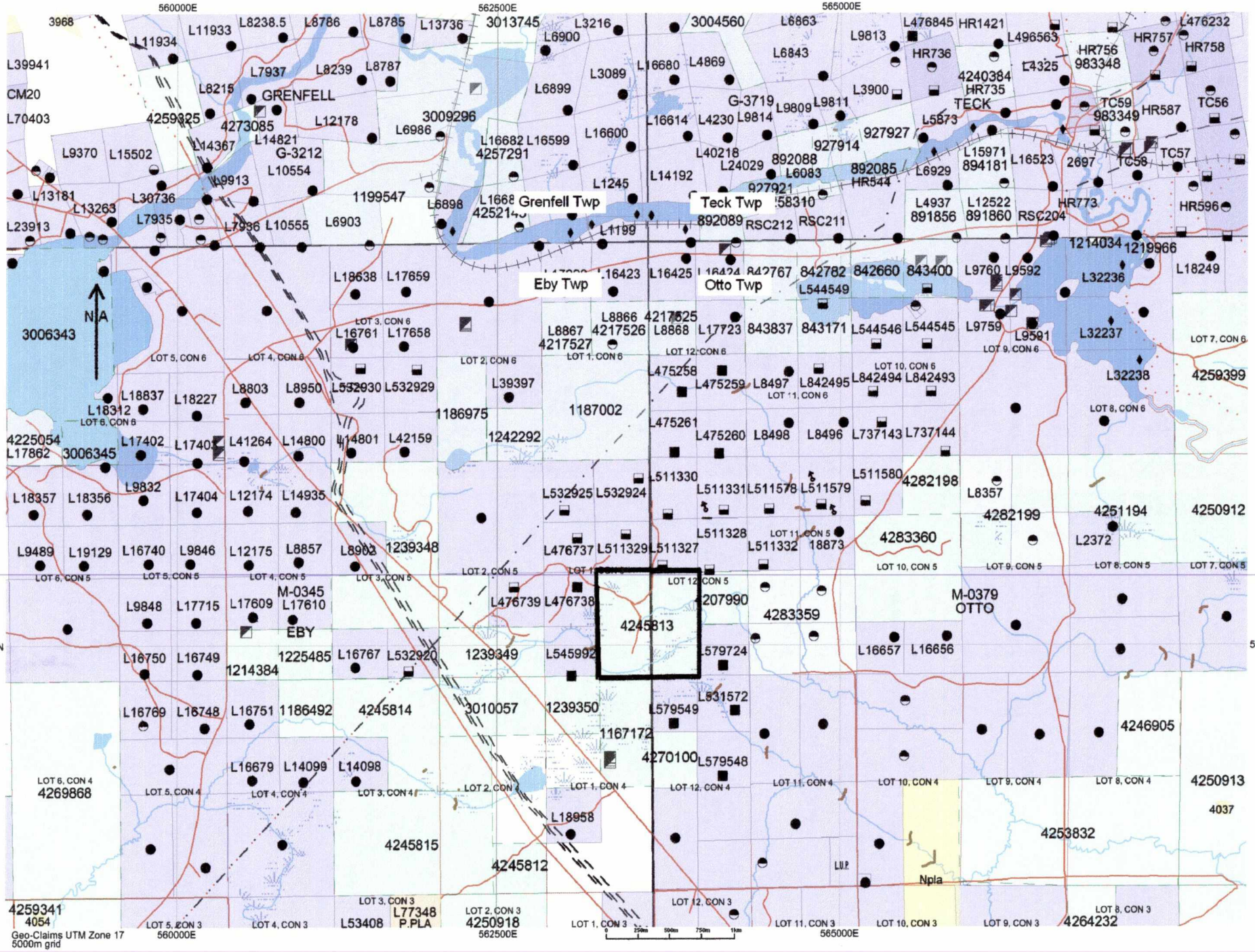

560000E
562500E
565000E
5325000N
GRENFELL
Grenfell Twp
Eby Twp
Teck Twp
Otto Twp
EBY
OTTO
TECK
N
A
Geo-Claims UTM Zone 17
5000m grid

Figure - 2

PROPERTY LOCATION

The claim is located in the Larder Lake mining division approximately 12 kilometers south-west of the town of Kirkland Lake. The group sits midway on the eastern end of Eby Township and has Highway 11 passing through the claims from north west to south east. This is in the Kirkland Lake Resident Geologists District and can be found on NTS-42 A/1 with the geographic center being at approximately 80°08'47"W and 48°04' 36"N .

ACCESS

Heading south on Hwy.#11 from the intersection of Hwy.#66 and trans-Canada Hwy.#11 at Kenogami for 2.8 kilometers will bring you to a forestry clear cut directly west of the claim. Unfortunately after the lucrative forestry operations finished, road access was removed. The old cut roads do provide good walking or atv access.

CLAIMS

The project area encompasses a staked mining claim block comprising 4 claim units, totaling about 150 acres (~60ha) in Temiskaming District. The claim block is recorded on Plan M-0345 of the subdivided Township of Eby and on Plan M-0379 of the subdivided Township of Otto. The claim and description are as follows:

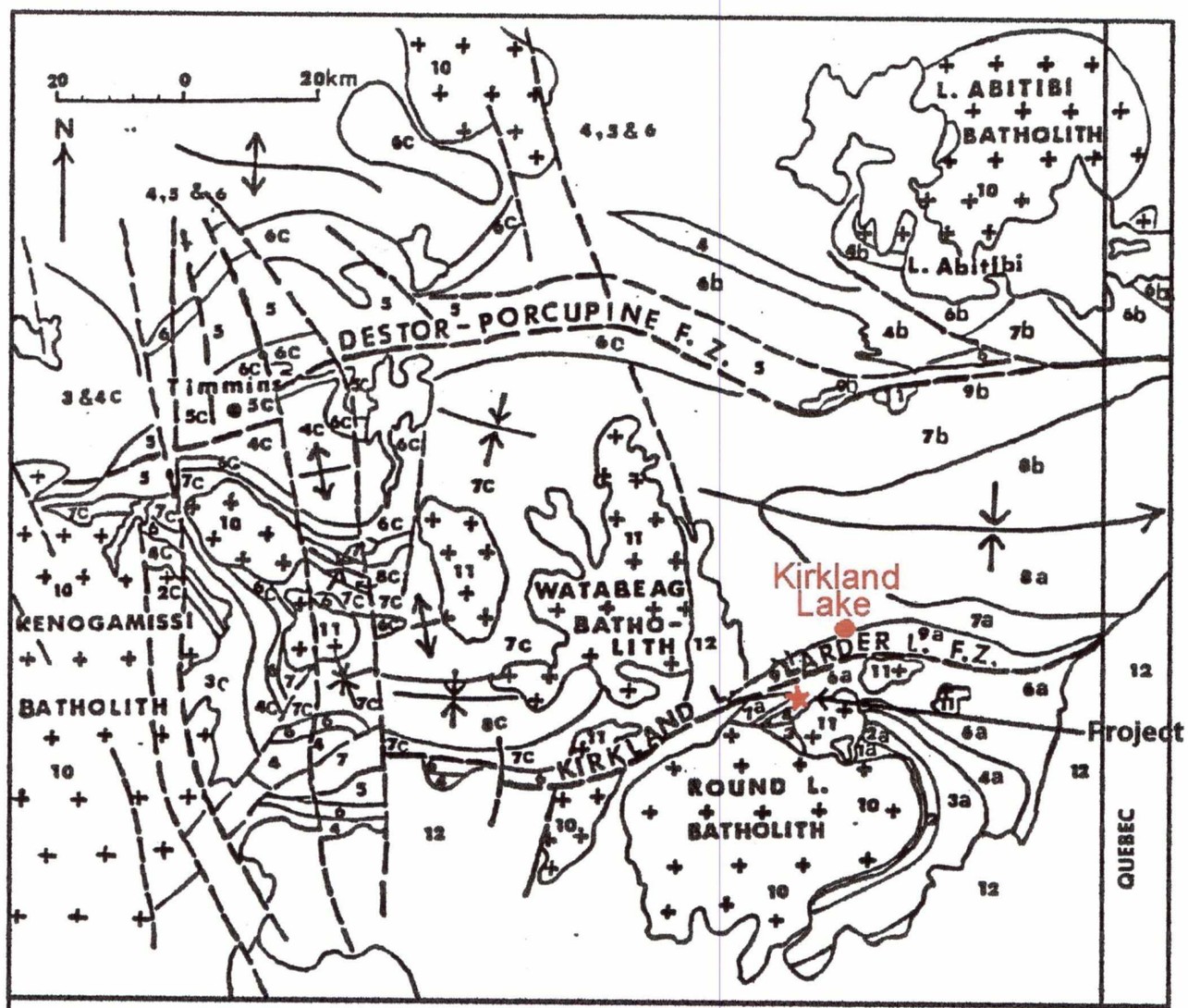
CL#4245813 - Eby-Lot 1, Con.5 E1/2 of S1/2 + Otto-Lot 12 Con.5 W1/2 of S1/2

GENERAL GEOLOGY

This claim area lays within the Abitibi Greenstone Belt of the Superior Province. This is a region of predominantly Archaen mafic to felsic pillowed, massive and agglomeratic volcanics and granitic batholiths with attendant intrusions, with minor clastic interflow and fluvial sediments, at the south central region of the Superior Province. 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). The Temiskaming Rift is a regional graben feature strinking at about 330° across this part of Ontario.This young rift system has a definite control association with diamond bearing intrusives such as kimberlites. Several NNW-SSE trending fault features passing through the area have been identified as probable Temiskaming Rift associated features. Jurassic age diamond-bearing kimberlite pipes are found east of Kirkland Lake and Matheson". *(ref Lovel 1967) West of Lake Kenogami Lake in the west, and east of Kerr Addison in the east, relatively flat-lying Proterozoic sedimentary rocks cover the older folded formations.To the west of the claim group, the north-south finger of locally termed "Huronian" sediments appear to be filling a paleo depression of probable structural origin. Field work by the OGS has shown LCDZ strain and faulting affecting these much younger overlying sediments.

Several eras of intrusion and deformation have affected most of the lithologies present. Major structural deformation zones,(locally the Larder-Cadillac Deformation Zone or LCDZ), parallel each other west to east across the belt and have acted as a control on gold deposition. The Abitibi Belt is host to many large gold and base metal deposits on both sides of the Ontario-Quebec border along these structural trends and has an exploration history going back well into the 1800's. A band of altered mainly fluvial and volcanic sediments of Temiskaming age, folded and upturned to a near vertical position, coincide with the main structural trend of the LCDZ about

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 Wabewawa 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

2200 meters to the north of the claim group. The round Lake batholith, a large Archaen aged granitic intrusive occurs about 6 kilometers to the south-west. Less than 200 meters south of the claim group is the "Otto Stock", an almost circular, somewhat zoned mafic(sanukitoid?) intrusive of some 10 kilometer diameter. Thin bands of clastic sediments and iron formation belonging to the older Skead group trend east-west through the map area locally south of the LCDZ and wrap around the Otto Stock. The number 2 post area of L4245813 is within this band of sediments. The Amikougami cross-fault, about 5000 meters west of the claims, is shown to cut the mapped exposure of the Otto stock in half from north to south. Mapped displacement is about 1800 meters with the east side moving north relative to the west side. No reliable data documents the vertical or rotational component of displacement. Data from 3 sites, the north boundary of Teck Twp area, proximal to the the KL main break systems, and at the Otto stock indicates incompatable displacements which rotational or vertical aspects can not resolve.

The Kirkland Lake Break is located about 6000 meters north east of this claim area, laying on the east side of the off-setting Amikougami Creek cross-fault. The Macassa Mine, the last operating producer of the historic Kirkland Lake camp which has produced in excess of 28 million ounces of gold, has its #3 shaft at this area. 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. Epithermal veining and alteration contain elevated gold, silver and molybdenum and variously teluriun, copper, antimony, uranium with minor lead also occuring. Wallrock alteration is commonly hematization or bleaching with carbonitization, silicification and locally sericitization.

At the new South Mine complex, which lays about 300 to 600 meters south of the Main Breaks, an entirely new mineralized system in the Kirkland Lake mining camp is being mined. It is characterized by generally shallowly dipping (25°-50°) structurally controlled zones of finely disseminated pyrite, visible gold and tellurides. This is in contrast to the steeply dipping (70°-80°) quartz vein hosted gold of the Main and '04 Break that put Kirkland Lake on the map, 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. Gold mineralization in the SMC area occurs in a complex interconnected network of narrow, east to northeast trending shallow south dipping shear zones and auriferous alteration. It consists of wide, gold-bearing alteration and mineralization halos, in contrast to the narrow quartz vein systems associated with the Main and '04 Breaks A distinct buff colored albitic? alteration is evident in many zones. The SMC represents. These much flatter zones 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.

Although there have been several postulated correlations of the economic faults to fault or vein features to the west of this north south Amikougami fault, no economically encouraging "ore blocks" have been defined to the west of the Amikougami Fault which can be minerologically or structurally correlated to the main Kirkland Lake breaks. Available geologic reports and publications appear to have differing information and estimation of the amout of and direction of off-set by the Amikougami Fault. The east-north east trending Kirkland Lake Break is mapped as merging with the Larder Cadillac break about 2800 meters directly north of L4245813.

CLAIM/LOCAL GEOLOGY

O.D.M. Map M-2239 of Eby Twp. shows the claims to be underlain by mafic volcanic rocks of basaltic to andesitic composition. A band of clastic sediments and iron formation belonging to the older Skead group projects into the claim block from the south east and is associated with several airborne conductive anomolies due to the nomerous interlayers of pyrite. A narrow gabbroic dike is mapped as cutting east west across the north of the claim block.

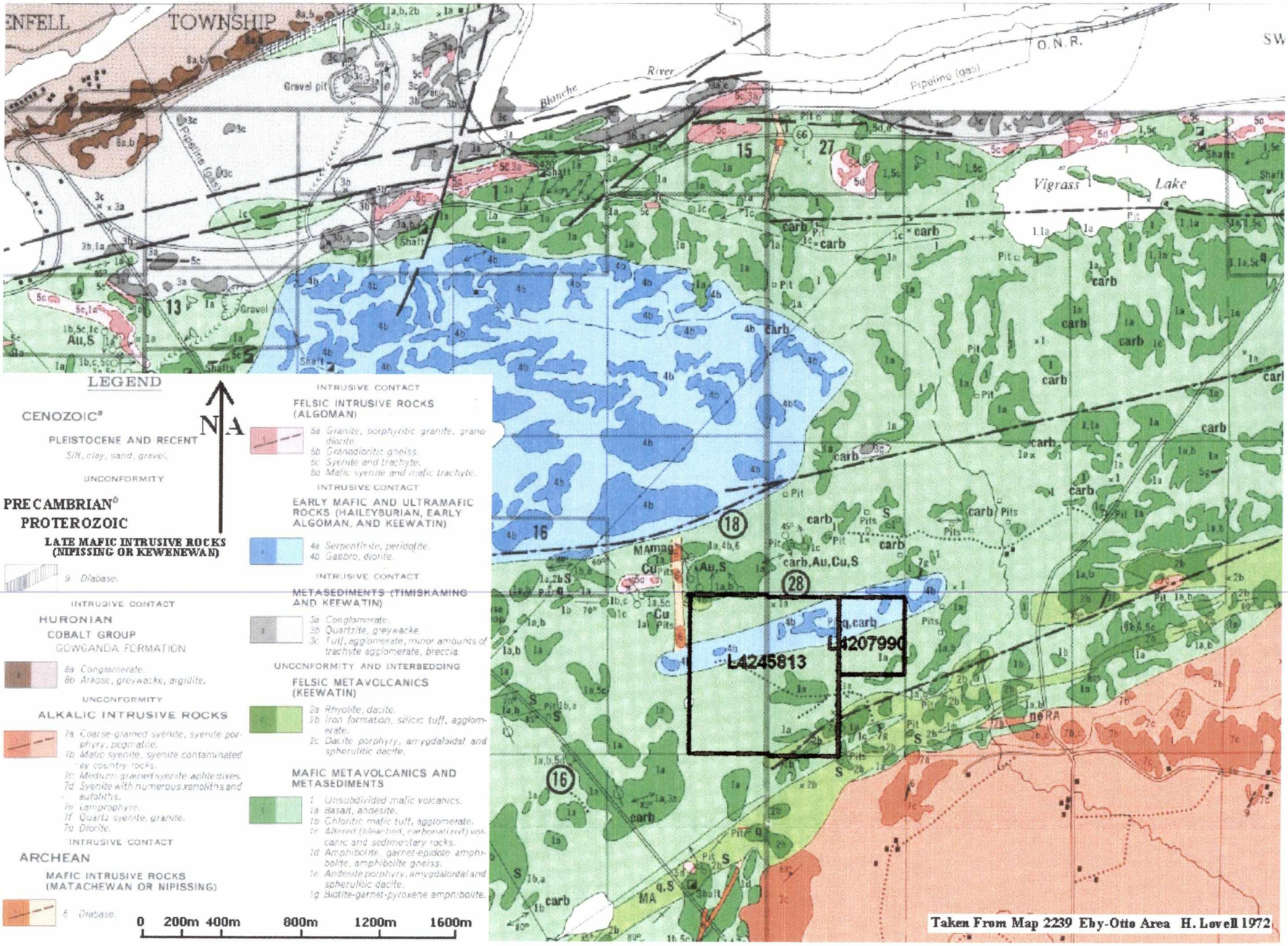

ENFELL TOWNSHIP
O.N.R.
SW
River
Blanche
Pipeline (gas)
Gravel pit
Vigrass Lake
Taken From Map 2239 Eby-Otto Area H. Lovell 1972
L4207990
L4245813
LEGEND
CENOZOIC
PLEISTOCENE AND RECENT
Silt, clay, sand, gravel.
UNCONFORMITY
PRECAMBRIAN
PROTEROZOIC
LATE MAFIC INTRUSIVE ROCKS (NIPISSING OR KEWENEWAN)
9 Diabase.
INTRUSIVE CONTACT
HURONIAN
COBALT GROUP
GOWGANDA FORMATION
8a Conglomerate.
8b Arkose, greywacke, argillite.
UNCONFORMITY
ALKALIC INTRUSIVE ROCKS
7a Coarse-grained syenite, syenite porphyry, pegmatite.
7b Mafic syenite, syenite contaminated by country rocks.
7c Medium-grained syenite aplite dikes.
7d Syenite with numerous xenoliths and aufaliths.
7e Lamprophyre.
7f Quartz syenite, granite.
7g Diorite.
INTRUSIVE CONTACT
ARCHEAN
MAFIC INTRUSIVE ROCKS (MATACHEWAN OR NIPISSING)
6 Diabase.
INTRUSIVE CONTACT
FELSIC INTRUSIVE ROCKS (ALGOMAN)
5a Granite, porphyritic granite, granodiorite.
5b Granodioritic gneiss.
5c Syenite and trachyte.
5d Mafic syenite and mafic trachyte.
INTRUSIVE CONTACT
EARLY MAFIC AND ULTRAMAFIC ROCKS (HAILEYBURIAN, EARLY ALGOMAN, AND KEEWATIN)
4a Serpentinite, peridotite.
4b Gabbro, diorite.
INTRUSIVE CONTACT
METASEDIMENTS (TIMISKAMING AND KEEWATIN)
3a Conglomerate.
3b Quartzite, greywacke.
3c Tuff, agglomerate, minor amounts of trachyte agglomerate, breccia.
UNCONFORMITY AND INTERBEDDING
FELSIC METAVOLCANICS (KEEWATIN)
2a Rhyolite, dacite.
2b Iron formation, silicic tuff, agglomerate.
2c Dacite porphyry, amygdaloidal and spherulitic dacite.
MAFIC METAVOLCANICS AND METASEDIMENTS
1 Undivided mafic volcanics.
1a Basalt, andesite.
1b Chloritic mafic tuff, agglomerate.
1c Altered (bleached, carbonatized) volcanic and sedimentary rocks.
1d Amphibolite, garnet-epidote amphibolite, amphibolite gneiss.
1e Andesite porphyry, amygdaloidal and spherulitic dacite.
1g Biotite-garnet-pyroxene amphibolite.
N
A
0 200m 400m 800m 1200m 1600m

Figure - 4

Several occurances of gold are located in the immediate area around the claim. Most notably of the gold occurances in the area is the workings of the Gateford Mine about 5 kilometers north east of this claim, on the west shore of Otto Lake. These holdings include the workings of the Swastika Mine which is the site of the first discovery west of Larder Lake in 1906, three years before the major discoveries 4½ north east in what was to become the historic Kirkland Lake gold camp. The property is underlain by volcanic rock cut by syenite dikes. Gold occurs in very rich thin flat laying quartz veins associated with galena and molybedenite. Initial production at the Swastika Mine began in 1911 and was sporadic unill about 1950. About 1 million dollars of gold from about 100,000 tons of ore were produced from the combined Gateford holdings.

In 1911 gold was discovered on the "Baldwin" property 1700 meters north north west of the claim. The property was developed with a shaft to 400 feet, 920 feet of crosscutting, and 1120 feet of drifting. Fine grained native gold associated with molybedenite and chalcopyrite occurs in several east-west oriented quartz stringers within a carbonate schist. Shoots also occur in red syenite porphyry dykes and light pink fine grain syenite. The shaft and workings are in the Temiskaming aged sediments.

In 1939 gold was discovered 2800 meters north -west of this claim on the Rogick-Elliott-Clark claims. Extensive trenching and drilling showed gold values up to about ½ ounce per ton in gold bearing zones up to 20 feet wide, associated with sheared contacts of red syenitic dykes and carbonate rock. In the late 60's early 70's much of the surface exposures have been removed by open cutting. No report of recovered gold was disclosed.

In around 1944, Sylvanite Mines reported gold values across 2 to 4 feet in a quartz veined zone in schist. about 500 meters west of this claim. No follow up work reported.

In 1944, the "Lumsden" shaft was sunk on a red porophyry dike about 650 meters west ot the claim line of the the south west boundary of this claim. A pinkish quartz vein at the botton of the shaft assayed about .17 ounces per to across five feet. No reported follow up drilling or work. This is probably represents the west continuation of the Todora geology described next. This would indicate about 1.2 kilometers of this zone would be present across claim L1239348.

In around 1948, drilling about 500 meters north on the adjacent claim on the "Todora" claims encountered molybedenite and chalcopyrite with gold in quartz stringers and quartz porphyry in sheared volcanic rocks and iron formation. About 600 meters east of this the 112 foot "Cheltonia" shaft was sunk south of the zone but crosscutting did not go far enough to encounter the shearing. Grab samples from pits in the shaft area reported up to 13% copper.

In around 1948, drilling about 300 meters north of the claim, on the adjacent "Todora" claims encountered molybedenite and chalcopyrite with gold in quartz stringers and quartz porphyry in sheared volcanic rocks and iron formation. About 800 meters east the 112 foot "Cheltonia" shaft was sunk south of the zone but crosscutting did not go far enough to encounter the shearing. Grab samples from pits in the shaft area reported up to 13% copper.

In 1980, Noranda Exploration drilled three core holes totalling 1243 feet on the then called Allsopp property being the owner of the Todora-Cheltonia claims. (ref : AFRI - 42A01SE0146) The ground located targets were conductors shown on a recently conducted regional electromagnetic survey. Hole 80-3 was about 600 meters north and holes 80-1 & 80-2 were about 600 meters north-north east of L4245813. All holes cut highly graphitic laminated to brecciated tuffs and argillites. Wide intervals of 50% to 60% graphite are logged. Several layers up to 10 feet of 90% graphite cut only by thin qz-carb stingers are also logged. Wide areas of green carbonate alteration showing fuchsite and or mariposite is also logged as occuring seemingly in the more silicious very low graphite tuffaceous layers. Although mostly thought of and refered to as a "carbonate" facies of the local sequence of iron-formation by most previous published material, this alteration may also indicate an plumbing system tapping LCDZ type associated fluids which produce similar indication elsewhere along the LCDZ and its various splay features. Such a feature would fit well and further substantiate earlier works indicating a deep seated alteration system passing across the area.

From about 1988 to present, overburden stripping work by Allsopp et.al. in the Todora and Cheltonia area exposed a chalcopyrite vein system up to 1 m wide. At the southern contact of this vein system, chalcopyrite is locally concentrated in a band up to 10 cm wide that grades up to 12.13% Cu. The mineralized zone strikes 060°, has a near vertical dip and is hosted within

carbonatized mafic volcanic rock that is exposed over a 25 m width. Chalcopyrite is also exposed in another overburden-stripped area to the east. A syenite intrusion is exposed at the northern side of both stripped areas. Drilling of several holes has had limited success in gold values but has established an extensive fault related alteration system. The potential that may exist along strike and at depth of a major alteration zone with associated IP anomalies along the Eby–Otto fault, both on the property and to the west of it on . This fault zone is located 1.5 km south of the auriferous Cadillac–Larder Lake deformation zone.

Sharpley (1999) describes the mineral and alteration on the Allsopp property as follows:

> *A major zone consisting of iron carbonate, silicification and pyritization occurs over a strike length of 1000 m and a width of 200 m on the Allsopp-Huston Property along the Eby-Otto fault, which is a subsidiary of the Cadillac-Larder Lake Break within the Larder Lake Group of tholeiitic volcanics. A zone of silicified breccia occurs within the envelop of alteration with disseminated pyrite over a strike length of 600 m and over a width of 50 m. Geochemically anomalous values occur in and around the alteration zone ranging up to 1851 ppb (Au). Moderate to strong induced polarization (chargeability) anomalies occur within the alteration zone over a strike length of 800 m and a width of 100 m.*

In 2005, the Resident Geologist staff visited the area of the Cheltonia shaft now held by and referred to as the Allsopp property. "*Silicified, carbonatized and chloritized rock, probably altered mafic volcanic rock, occurs on the access road to the overburden stripped areas at NAD83 Zone 17 562856E / 5325623N. The rock has undergone micro-fracturing with specularite? fracture filling and contains up to 15% pyrite. This rock unit is perhaps similar to the silicified breccia described by Sharpley (1999). A similar rock also occurs, probably on strike, 1.45 km to the west-northwest in an outcrop on the western side of Hwy 11 at approximately NAD83 Zone 17 561455E / 5325782N. If the mineralized and hydrothermally altered sites are part of a continuous zone then the strike length could exceed more than 2.0 km. Although the gold content associated with this large mineralized alteration zone is generally low, sporadic gold values ranging up to 1851 ppb make it a very attractive target for further exploration. A number of gold deposits in the Kirkland Lake Resident Geologist District such as the Lightning Zone at the Holloway Mine, "flow ore" at the Kerr Mine and the "D" zone at the Cheminis Mine do not come to surface. In the plane and above these orebodies/deposits there is ample evidence at surface for their existence in the form of carbonatization, silicification, pyrite mineralization and minor, sporadic gold mineralization. The best potential for mineralization along this alteration zone should be determined by an IP survey measuring to a depth of 400 m as suggested by Sharpley (1999). Deep drilling should then follow up on the most favourable IP defined targets to ultimately test to a depth of 400 m below surface and possibly beyond*". (Meyer et el 2005)

In 2004 -05, GLR Resources and RJK Minerals drilled a couple of deep south facing drill holes about 200 meters south of L4245813 on adjacent claim L1167192. Hole 04-01 was drilled to investigate an airborne electromagnetic anomaly with associated soil and tree geochemical anomalies near the Eby - Otto Township boundary. The diamond drill hole intersected silicified felsic tuffaceous fragmental volcanics north of the Otto Stock to a depth of 272 metres. Strong disseminated stringers of pyrite, pyrrhotite and locally weak disseminations of sphalerite over a core length of 225.94 metres are logged. The upper and lower formations were logged as graphitic. The upper section from 54.0m to 60.0m assayed 0.36% Zn and 0.06% Cu over a core length of 6.0 metres at a vertical depth of 40 m below surface. The lower section from 177.27m to 186.00m assayed 0.05 % Zn and 0.01% Cu over a core length of 8.73 meters at a vertical depth of 135 meters below surface. Eby-05-01 was drilled to 502 meters total. The hole was set at -45° dip with an azimuth of 155°. Distributions of semi-massive zinc or copper were encountered, but combined Cu-Zn-Pb metal content of these is once again low. Less than 0.7% individually and less than 0.8% in combination were encountered. The best intersection obtained was at a vertical depth of around 250 m. An interval-weighted average of 0.2% zinc, 0.03% copper, 0.02% lead, 0.6 *g/t* silver and trace (5 ppb) gold was cut over a true-width of 2.7 m (8.6 m apparent drill interval). Locally, it was interpreted that a roughly north-south oriented south plunging synclinal fold was cut in the holes which would explain the opposing facing directions in the upper and lower

drill cores. In summarizing it was noted that there are many characteristics associated with volcanic-associated, copper-zinc type deposits and further study was warranted. (ref : AFRI - 20001757) It is noted that a series of workings on surface directly to the south of the drilling which are locally refered to the Ahola property showed gold values in pits and shallow shaft work. Submitted reports do not comment on any correlation between features in the drill holes and the surface geology in the area of the Ahola workings.

PREVIOUS - LOCAL WORK

In 1919 Eby Township was included in mapping by H. C. Cooke of the Geological Survey of Canada while mapping the Kenogami, Round, and Larder Lakes areas.

In 1935, W. S. Dyer of the Ontario Department of Mines mapped Eby Township as part of the Geology and ore deposits of the Matachewan-Kenogami area.

In 1967 Eby Township was mapped by H. L. Lovell of the Ontario Department of Mines. The report and colored geology map M-2239(1inch to ½ mile) was released in 1972 as Geological Report 99.

In 2001 B. R. Berger, Geologist in the Precambrian Geological Section O.G.S., D. Guindon, District Geologist Kirkland Lake Region O.G.S. and G. Grabowski, District Geologist Kirkland Lake Region O.G.S. reported in Open File Report 6070 (Summary of Field Work and Other Activities 2001, Project Unit 10), that a Geological Reconnaissance along Highway 66, from Matachewan to Swastika had begun. The purpose of this multi-year project is to re-map and improve the geological database. B. R. Berger reports that the Otto Stock, in Otto and Eby townships is characterized by nepheline-bearing syenite, quartz syenite and includes previously unrecognized mafic and ultramafic alkalic gabbro, hornblendite and lamprophyre phases.

Also Berger tells us that in the southern part of the map area, calc-alkaline felsic intrusions (gneiss, tonalite, quartz monzonite and granodiorite) are found. The mafic and ultramafic phases of the alkalic intrusions are commonly enriched in platinum group elements (PGE) and the hornblendite, alkalic gabbro and lamprophyre of the Otto Stock are potential host rocks of this type of mineralization.

Sample 01-BRB-019 taken along Highway 11, about 800 meters due south of L4245813 showed values in Au, Pd, pt and Cu.

In 2002, the then claim holders took their own samples on each side of Highway 11 at the site of the OGS sampling. Best assays were 0.024 oz/ton Au, 5380 ppm Cu and 219 ppb Pd.

Undoubtably the area was looked at by many prospectors in the early part of the 1900's as the Swastika Camp and then the Kirkland Lake Camp were being opened up and gold discoveries were drawing many to the area. As for submitted assessment work on file for the area, several work programs have been conducted on various parts of the claim area over the last half century century.

In 1988, Butte Canyon Resources held concession 5, lot 1, WE1/2 of S1/2 as L891906 and L891902 n-s respectively, as part of a larger holding. Butte carried out geological mapping, sampling, geochemical assessment, magnetometer and electromagnetic surveys. The surveys outlined the general east-west trend of the geology. Of note is the results of two samples taken from the highway rock cut about 1900 meters north west of L4245813. Sample #4928 and #4929 returned values of 387ppb platinum and 390 ppb platinum respectively. Sample #4935 taken about 150 meters SW of the above samples returned 1,500 ppm Cr, 534 ppm Ni and 63 ppb Au. About 90% of the 35 - 45 scattered outcrops mapped on the two claims are pervasively carbonitized or chloritic. No follow up work on these areas has been reported. (ref : KL 309). The potential of PGE enriched magmatic sulphides existing in the area has been discussed by Berger et.al in 2003 when previously mapped mafic volcanics were found to trend into the komatiic suite.

No other assessment work has been found on the actual claim area. Although the east half of claim L4245813 which falls in Otto Township was previously leased for over 20 years, it appears that the work to enable leasing was performed on a different area of the leased group.

PRESENT WORK

During the fall of 2015, mapping and light hand stripping was done on the claim area. Some



Bimodal feldspar porphyry showing many pea to pebble sized zenoliths



Same porphyry showing various rounded part resorbed clasts and angular fresh clasts

Figure - 5

reflagging was done where old fabric was noted. Access was gained along a logging trail which enters the claim in the region of the #3 post and wends its way along the south of the claim. The cut areas are mostly on the higher ground with wide boggy areas throughout the property. Following are notes on the primary areas looked at.

At site 1 a 1.5 meter by 1.5 meter section of syenitic rock was exposed. The rock is a reddish pink with about 25% to 30% whitish feldspars in two sizes with the larger feldspars being up to 10mm in size and being a creamy white with the smaller feldspars being average about 2 to 3mm in size and of a more translucent white colour. The smaller feldspars appear to be more regular or euhedral in shape than larger group feldspars. Numerous pea size to large pebble sized zenoliths of various lithologies are throughout the syenite. Both rounded partially resorbed fragments and sharp fresh angular fragments are evident. Little pyrite mineralization is noted nor were any shearing or veining evident on the area visited. Several banded tuff zenoliths and mafic volcanic clasts are noted. - (pics-page 10)

At site 2, a hematized or felsic phase within a wide mafic syenite occurs. Fracturing and epidote alteration is noted with odd fine brassy pyrite. It is planned to return to this site to do more work clearing and sampling if warranted. No orientations were determined. Interestingly, at this location, a 80cm x 60cm x 60cm sharp angular boulder of cherty appearing quartz was located. Sericite as disseminated grains occurs throughout possibly indication the boulder to be from an altered impure cherty iron formation. The boulder has a light reddish brown oxidation only on the surface. Fine thinly divided pyrite is noted. As the latest ice direction in the area is at about 170° to 180°, it is probable that the source is not too far to the north. A sample should be submitted to assess the merit of tracking the source area of the boulder.

At the far east of the claim, a 1 meter by 1.5 meter cleaned area exposes several gashy quartz carbonate stringers in a medium grained mafic volcanic rock possibly a diorite or recrystalized volcanic affected by the metamorphic halo of the Otto stock. At this site 3, the rock is dark green to blackish with fair percent of stubby hornblende up to 2mm in size in a finer grain matrix. Weak lineation on the outcrop may be related to strain and trends paralel to the orientation of the qz-carb stringers. A shear structure is mapped as occuring to the north of the cleaned area. Very little mineralization noted. (pic-page12)



Quartz-carbonate stringers in dioritic rock north of #2 post area Compass pointing north

Figure - 5a

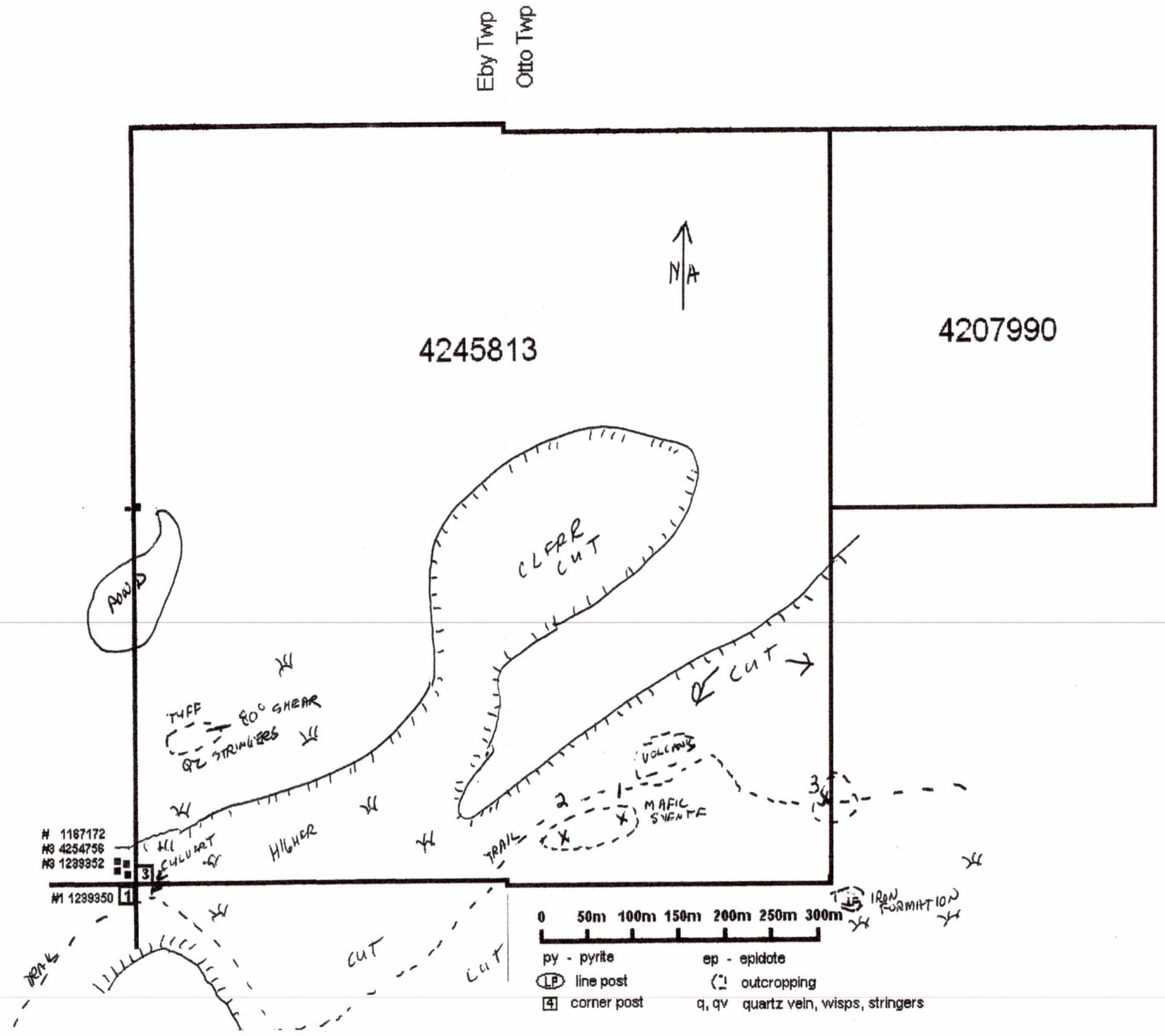

Eby Twp
Otto Twp
4245813
4207990
N
A
CLEAR CUT
CUT
ROADS
TUFF
60° SHEAR
QZ STRINGERS
VOLCANIC
MAFIC SYENITE
TRAIL
HIGHER
CULVERT
#1 1167172
#3 4254756
#3 1239352
#1 1239350
IRON FORMATION
0 50m 100m 150m 200m 250m 300m
py - pyrite
ep - epidote
LP line post
outcropping
4 corner post
q, qv quartz vein, wisps, stringers

Figure - 6

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